20772

National Library of Canada / Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE / THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/NOM DE L'AUTEUR Raymond Lee Hanson

TITLE OF THESIS/TITRE DE LA THÈSE A TRI DIMENSIONAL ANALYSIS OF TEACHER-STUDENT VERBAL INTERACTION DURING EVALUATIVE VENTURES

UNIVERSITY/UNIVERSITÉ UNIVERSITY OF ALBERTA

DEGREE FOR WHICH THESIS WAS PRESENTED/GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE Ph D

YEAR THIS DEGREE CONFERRED/ANNÉE D'OBTENTION DE CE GRADE 1975

NAME OF SUPERVISOR/NOM DU DIRECTEUR DE THÈSE Dr T Aoki

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/DATÉ 4-17-75 SIGNED/SIGNÉ Raymond L. Hanson

PERMANENT ADDRESS/RÉSIDENCE FIXÉ 1455 Anthony Ave
Cottage Grove, Oregon 97424

NL-91 (3-74)

THE UNIVERSITY OF ALBERTA

A TRI-DIMENSIONAL ANALYSIS OF TEACHER-STUDENT VERBAL INTERACTION DURING EVALUATIVE VENTURES

by

© RAYMOND LEE HANSON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

DEPARTMENT: SECONDARY EDUCATION

EDMONTON, ALBERTA

FALL, 1975

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A TRI-DIMENSIONAL ANALYSIS OF TEACHER-STUDENT VERBAL INTERACTION DURING EVALUATIVE VENTURES submitted by RAYMOND LEE HANSON in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Supervisor

External Examiner

Date April 18, 1975

ABSTRACT

Statement of the Problem. What relationships exist between the teacher-student talk dimension, the teacher-student ideas dimension, and the evaluative moves dimension when a tri-dimensional descriptive analysis was made of teacher-student verbal interaction during evaluative ventures.

Procedures. The design consisted of recording verbatim teacher-student verbal interaction in actual classrooms. The population sampled consisted of twenty Teachers and 563 Grade Ten Students. All teachers and students were supplied a four-page mimeograph containing a pre-selected discussion topic. Each teacher was given a teacher's guide containing the procedures to be followed, and the content to be discussed during recording sessions. Teachers were instructed to use whatever method they normally use during class discussions. Recording sessions lasted approximately 35 minutes.

Two observers were used to code verbal interaction. A three-second time interval was used to code verbal behavior. Interobserver reliability was determined by using Scott's Coefficient (pi). Ten of the twenty observation sessions were used to compute interobserver reliability. All reliability coefficients were at or above 0.85 except for one dimension which was 0.84.

The instrument used to analyze classroom verbal interaction was a Tri-dimensional Observation Category System (TOCS). TOCS has 19 categories for recording cognitive and affective verbal interaction.

TOCS was constructed by using Flanders Interaction Analysis System (IAS) and Meux's Evaluative Operations Analysis System (EOAS). Flanders IAS made up the first and the second dimensions of TOCS--the teacher-student talk dimension and the teacher-student ideas dimension. These dimensions represented the affective domain.

The categories for the teacher-student talk dimension were: (1) teacher responds, (2) teacher initiates, (3) student responds, (4) student initiates, and (5) none of the above. Categories for the teacher-student ideas dimension were: (6) teacher direction, (7) teacher develops own idea, (8) teacher new idea, (9) student new idea, (10) student develops own idea, (11) student direction, and (12) none of the above. Meux's EOAS made up the third dimension of TOCS--the evaluative moves dimension which represented the cognitive domain. The major categories in this dimension were: (13) identification moves, (14) descriptive moves, (15) rating moves, (16) criterial moves, (17) relational moves, (18) tangential moves, and (19) none of the above.

Conclusions. The major conclusions related to this study were the following: (1) TOCS proved to be a valuable tool for coding classroom cognitive and affective verbal interaction. (2) Because of TOCS' complexities, it is highly unlikely that teachers will use the system under regular classroom instructional situations.

(3) The findings of this study showed that teacher responsive verbal behavior showed no significant positive relationships with student ideas or student new ideas. Teacher initiative behavior correlated significantly with teacher idea, descriptive moves, and

relational moves. Also, teacher new idea correlated significantly with relational moves. A high positive correlation was found between identification moves and teacher direction. Teacher initiation correlated significantly with teacher ideas and criterial moves.

ACKNOWLEDGMENTS

The writer is deeply indebted for the wise counsel and the warm friendship given to him by Dr. Ted Aoki. Dr. Aoki's direction and guidance in the preparation of this thesis has been invaluable. A sincere debt of gratitude is also given to Drs. Johnson (Department of Geography), Patricia Browne, Gerald Berry, and James Bell for their continued encouragement, and their assistance in all phases of the study.

Acknowledgment is extended to the administration and the teachers of the Edmonton Public Schools for their cooperation in carrying out this study. Without their aid the study would not have been possible.

Finally, grateful love and appreciation is hereby expressed to my wife, Margrete, for her patience, understanding, and encouragement during the many hours of work it took to complete this study. Her dedication as an interaction observer contributed a great deal to the reliability and validity achieved during recording sessions.

TABLE OF CONTENTS

Chapter		Page
I	STATEMENT OF THE PROBLEM	1
	Purpose	1
	Classroom Observation	2
	Points of Departure	4
	Problem	14
	Research Questions	15
	Scope and Limitations	15
	Definition of Terms	16
	Significance of the Study	18
II	REVIEW OF RELATED LITERATURE	19
	Viewpoints on Teaching	19
	Literature Related to the Interactive Phase of Teaching	25
	Affective Systems	26
	Cognitive Systems	28
	Multidimensional Systems	30
	Values Studies	32
	Summary	34
III	RESEARCH PROCEDURES AND METHODOLOGICAL CONSIDERATIONS	36
	Methodological Considerations	36
	Data Collection Procedures	45
	Population and Sampling	45
	Observation Procedures	45

Chapter		Page
	Length of Recording Sessions	47
	Classroom Procedures	48
	Observer Training	48
	Statistical Procedures	49
IV	ANALYSIS AND INTERPRETATION OF DATA	51
	Introduction	51
	Analysis and Interpretation of Research Questions	51
	Analysis of Research Question One	51
	Interpretation of Question One	54
	Analysis of Research Question Two	55
	Interpretation of Question Two	58
	Analysis of Research Question Three	59
	Interpretation of Question Three	62
	Analysis of Research Question Four	63
	Interpretation of Teacher Response, Source of Ideas, and Evaluative Moves	65
	Interpretation of Teacher Initiates, Source of Ideas, and Evaluative Moves	71
	Interpretation of Student Response, Source of Ideas, and Evaluative Moves	74
	Interpretation of Pupil Initiates, Pupil Ideas, and Evaluative Moves	79
	Summary	79
V	CONCLUSIONS AND RECOMMENDATIONS	80
	Conclusions	80
	Methodological Considerations Met	80
	Applicability to Field Testing and Teaching	81

Chapter | Page

Significant Findings 81

Recommendations 83

BIBLIOGRAPHY 86

APPENDIX 91

APPENDIX A: SUMMARY OF MOVES IN EVALUATIVE VENTURES 91

APPENDIX B: SUMMARY OF FLANDERS' INTERACTION ANALYSIS SYSTEM 95

APPENDIX C: SUMMARY OF FLANDERS' MODIFIED INTERACTION ANALYSIS SYSTEM 98

APPENDIX D: SUMMARY OF ARTICLES 101

APPENDIX E: SUMMARY OF TEACHER'S GUIDE 107

APPENDIX F: SAMPLE VERBATIM TYPESCRIPT 110

LIST OF TABLES

Table		Page
I	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING VERBAL RELATIONSHIPS BETWEEN TEACHER TALK AND EVALUATIVE MOVES	52
II	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN STUDENT TALK AND EVALUATIVE MOVES	53
III	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION TWO SHOWING RELATIONSHIPS BETWEEN TEACHER TALK AND SOURCE OF IDEAS	56
IV	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION TWO SHOWING RELATIONSHIPS BETWEEN STUDENT TALK AND SOURCE OF IDEAS	57
V	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN TEACHER IDEAS AND EVALUATIVE MOVES	60
VI	VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN STUDENT IDEAS AND EVALUATIVE MOVES	61
VII	MULTIPLE CORRELATION TABLE FOR TEACHER RESPONDS, SOURCE OF IDEAS, AND EVALUATIVE MOVES	64
VIII	REGRESSION COEFFICIENTS FOR VARIABLE ONE--TEACHER RESPONDS (CATEGORY 1) AND VARIABLE TWO--SOURCE OF IDEAS (CATEGORIES 7, 8, 9, and 10)	66
IX	MULTIPLE CORRELATION TABLE FOR TEACHER INITIATES, SOURCE OF IDEAS, AND EVALUATIVE MOVES	68
X	REGRESSION COEFFICIENTS FOR VARIABLE ONE--TEACHER INITIATES (CATEGORY 2) AND VARIABLE TWO--SOURCE OF IDEAS (CATEGORIES 7-10)	70
XI	MULTIPLE CORRELATION TABLE FOR STUDENT RESPONDS, SOURCE OF IDEAS, AND EVALUATIVE MOVES	73
XII	REGRESSION COEFFICIENTS FOR VARIABLE ONE--STUDENT RESPONDS (CATEGORY 3) AND VARIABLE TWO--SOURCE OF IDEAS (CATEGORIES 7, 8, 9, and 10)	75

Table | Page

XIII MULTIPLE CORRELATION TABLE FOR STUDENT INITIATES, SOURCE OF IDEAS, AND EVALUATIVE MOVES 77

XIV REGRESSION COEFFICIENTS FOR VARIABLE ONE--STUDENT INITIATES (CATEGORY 4) AND VARIABLE TWO--SOURCE OF IDEAS (CATEGORIES 7, 8, 9, and 10) 78

LIST OF FIGURES

Figure		Page
1	A TRI-DIMENSIONAL OBSERVATION CATEGORY SYSTEM FOR DESCRIBING TEACHER-STUDENT AFFECTIVE AND COGNITIVE VERBAL INTERACTION DURING EVALUATIVE VENTURES	8
2	FLANDERS' CLUSTERED INTERACTION ANALYSIS SYSTEM	12
3	A PARADIGM OF INSTRUCTION, TEACHING, AND LEARNING	22
4	A FOUR PHASE SYSTEM FOR ANALYZING TEACHING	23
5	INTEROBSERVER RELIABILITY COEFFICIENTS	42
6	SAMPLE CODING DISPLAY	46

CHAPTER I

PURPOSE

Investigators have urged social studies teachers to make conscious efforts to have students deal with normative issues. For example, Raths (1960) stated that students should be involved in what he calls "the process of valuing" (p. 28). Broudy, Smith, and Burnett (1964) asserted that "the time has come for the curriculum to give primary consideration to the study of the values and norms by which individuals and social conduct is regulated and justified" (p. 141). Others have indicated that it is "mandatory for the schools as one of the agents of social integration and transformation to deal with the ethical or moral issues which pervade our community" (Massialas and Cox, 1966, p. 160). And, Bruner (1971) has affirmed that it would be desirable:

> To declare, if not a moratorium, then something of a de-emphasis on matters that have to do with the structure of history, the structure of physics, the nature of mathematical consistency, and deal with it rather in the context of the problems that face us (p. 21).

These views suggest, at least in part, that the onus is on the teacher to provide a proper instructional climate for values teaching. But, we are warned by Coombs (1971) "many teachers cannot operate effectively in this area because of confusion and uncertainty" (p. 1). Jerrold Coombs' statement points to the need for instructional models that will facilitate the teacher's task during normative instruction.

Two models that could provide social studies teachers with information concerning normative instruction are Meux's (1967) Evaluative Operations Analysis System (EOAS), and Flanders' Clustered Interaction System (CIAS). Meux's Evaluative OAS can be used to analyze the cognitive dimension of normative classroom verbal interaction. Two dimensions of Flanders' Clustered IAS, teacher-student talk and source of ideas dimensions, can be used to analyze the affective components of normative classroom interaction. By combining Meux's Evaluative OAS with Flanders' teacher-student talk and source of ideas dimensions a comprehensive analysis can be made of normative classroom verbal interaction. Therefore, the purpose of this study was to add to the growing body of information related to values instruction, by undertaking a tri-dimensional descriptive analysis of the verbal interaction displayed by teachers and students engaged in evaluative ventures in Grade Ten social studies classrooms.

Classroom Observation

In recent years, investigators have called for systematic observation of teacher-student classroom verbal interaction. Many of these investigators have used systematic observation because they have felt that learning theory models have not helped researchers attend to classroom verbal interaction as an object of study (Gage, 1969, p. 119). Medley and Mitzel (1963) have suggested that teacher-student verbal interaction be analyzed to obtain information "about the teaching process and its relationship to pupil learning" (p. 249). And, Goodlad (1969) has called for naturalist studies of "the way it is" with

teaching: "objective field study--not requiring hypotheses, controls, and pretests--might well generate significant hypotheses for subsequent test in field experiments" (p. 368).

To make systematic observation a defensible technique for analyzing teacher-student verbal behavior, some researchers have used observation category systems (Flanders, 1965; Amidon and Hough, 1967; Bellack, 1968; Gallagher, 1967; Oliver and Shaver, 1966). Observation category systems have enabled investigators to analyze varying segments of the complex phenomenon of classroom verbal interaction.

Investigators that have incorporated observation category systems into their research designs have done so within a particular theoretical framework. Some investigators have been concerned with the affective domain (Flanders, 1965). Other research projects have focused on the cognitive domain (Bellack, et al., 1966; Gallagher, 1967; Smith and Meux, 1967). These studies have yielded important information about classroom verbal interaction. However, Rosenshine (1970) noted that systems that focus on one domain "offer only gross measures which may obscure other important classroom variables" (p. 284). This points to the need for multi-dimensional category systems that take into account both the cognitive and affective domains.

Some writers feel that during normative classroom discussions the affective and cognitive domains are both activated (Raths, Harmin, and Simon, 1966, p. 255). And, Smith (1967) claims that the affective and cognitive domains "are interrelated" (p. 52). Thus, the verbal interaction that is displayed during normative classroom discussions can only be partially analyzed with a one-dimensional category system.

Therefore, to capture more detail of the interaction process during normative classroom discussions this investigation utilized a tri-dimensional observation category system.

Points of Departure

The specific points of departure for this study included: (1) an investigation conducted by Milton Meux (1967) which examined the logical operations of classroom discourse during evaluative ventures, and (2) postulates stated by Ned A. Flanders concerning relationships between the social-psychological and the logical elements of teacher-student verbal interaction.

Milton Meux's Evaluative Operations Study

Milton Meux's study had two important implications for this study: (1) the results of his study provided a conceptual foundation for including the logical dimension in the analysis of teacher-student verbal interaction, and (2) Meux's Evaluative Operations Analysis System made up one dimension of the tri-dimensional category system used to describe classroom verbal interaction.

Meux's evaluative operations study occurred within the context of a larger investigation supervised by B. Othanel Smith (1967) which focused on the logical operations displayed by teachers and students during classroom discourse. For the purpose of their study they identified units of instruction in classroom verbal interaction which they called ventures. A venture was defined as "a segment of discourse consisting of a set of utterances dealing with a single topic and

having a single overarching content objective" (p. 6). The achievement of a content objective is implied in the idea of strategy. A strategy was defined as "a set of verbal actions that serve to attain certain results and to guard against others" (Smith, et al., p. 49). To carry out a strategy teachers manage classroom verbal activity by utilizing the treatment dimension:

> The treatment dimension is primarily concerned with the explication of concepts, the analysis of causal conditions, and the like. Here the teacher is involved more with the content of instruction than with the behavior of students. The treatment he employs will be influenced more by the requirements of the content than by student behavior. (Smith, et al., 1967, p. 51)

The treatment dimension was broken down into moves. Moves are "verbal in character and they may be thought of as units of content as well as manipulations" (p. 53). Upon analyzing typescripts of classroom discourse, Smith, et al., identified eight types of ventures.* One type was classified as evaluative. Meux (1967) defined an evaluative venture as a unit of discourse in which the objective:

> is a rating of an action, objective, event, policy, or practice; or a rating of a class of such things with respect to its worth, correctness, and the like. Discussion in ventures of this type usually attempts to determine whether or not some action, etc., is to be placed in a particular value category (p. 26).

Six groups of moves were found to characterize evaluative ventures: identification, description, rating, criterial, relational, and tangential. The identification move is concerned with the

---

*The eight ventures are: conceptual, causal, reason, evaluative, interpretative, rule, procedural, and ventures dealing with particulars.

identification of either the object to be valued or the value term to be applied to or withheld from the value object as the rating is made. Descriptive moves characterize the value object in ways that are relevant to the judgment that an evaluator will make about it. A rating move attempts to apply some value term to the value object. Criterial moves are concerned with the explication of the meaning of the value term or with the related process of explicitly stating the criteria that govern the use of the term in the particular rating. Relational moves are those which bear upon the justification of a rating and are extraneous to the criteria. Tangential moves give supplementary information about the value object which is not directly relevant to its rating. See Appendix A for a review of evaluative moves.

In Meux's Evaluative OAS no taxonomical hierarchy is implied. Also, moves are not categorized as being right or wrong. Evaluative moves are concerned with verbal behavior as it is related to the control of subject matter. The occurrence of moves in evaluative ventures do not follow a simple logical pattern. Meux (1967) states: "On theoretical grounds the sequencing of learning appears to be related to the order of moves" (p. 167). Each evaluative move interposes content and the ordering of the substance of instruction is related to the sequence of moves.

Meux found that evaluative ventures occurred more frequently in subject matter areas that emphasized normative content than in those subjects associated with descriptive content. The frequencies of evaluative ventures per subject area were: History 12, Sociology 3,

English 14, Science 4, Core 4, and none in Geometry. Evaluative ventures occurred in the instructional content of the humanities and the social studies approximately 1 in every 11 ventures. In the sciences they occurred approximately 1 in every 48 ventures.

These findings suggest that Meux's Evaluative OAS has utility for analyzing the logical elements of teacher-student verbal interaction in those classrooms where normative content is most likely to occur. However, analyzing classroom discourse within a cognitive framework conceals valuable information concerning the relationships between evaluative moves and the affective dimensions of teacher-student verbal interaction. For this investigation, then, Meux's six evaluative categories formed one dimension, the cognitive, of the Tri-Dimensional Observation Category System (TOCS) designed to measure the cognitive and the affective dimensions of normative classroom verbal interaction. Figure I contains behavior definitions of the categories making up TOCS. Dimension three contains Meux's evaluative moves. A seventh category, "none of the above" was added to the evaluative moves dimension. This helped satisfy the "exclusiveness" criterion, and provide reciprocity with dimension One and Two.

Flanders' Postulates on Classroom Verbal Interaction

Flanders' postulates concerning the teacher-student talk dimension, and the teacher-student idea dimension of classroom verbal interaction forms the second point of departure for this study.

Unlike Milton Meux's analysis, which focused on the cognitive

FIGURE 1

A TRI-DIMENSIONAL OBSERVATION CATEGORY SYSTEM FOR DESCRIBING TEACHER-STUDENT AFFECTIVE AND COGNITIVE VERBAL INTERACTION DURING EVALUATIVE VENTURES

DIMENSION ONE

TALK*

Teacher	1.	RESPONDS. Verbal acts which show teacher reaction to pupil initiation. Fulfill expectations of initial acts of students.
	2.	INITIATES. Verbal acts which serve to set the context for subsequent student verbal behavior.
Student	3.	RESPONDS. Verbal acts which show student reaction to teacher initiation. Student has limited freedom to express own ideas.
	4.	INITIATES. Verbal acts which serve to set the context for subsequent classroom interaction.
	5.	NONE OF THE ABOVE.

DIMENSION TWO

SOURCE OF IDEAS*

Teacher	6.	TEACHER DIRECTION. Directions to which student is expected to comply.
	7.	DEVELOPS TEACHER IDEA. Verbal acts which elaborates, attempts to explain more clearly, or enlarges upon own idea or idea contained in instructional material.
	8.	NEW IDEA. Verbal acts which serve to introduce, suggest, or interject new ideas into the discussion.
Student	9.	NEW IDEA. Pupils have alternatives and can express new ideas about topic introduced by the teacher or instructional materials.
	10.	DEVELOP PUPIL IDEA. Verbal acts which elaborates, attempts to explain more clearly, or enlarges upon own idea or idea contained in instructional material.
	11.	STUDENT DIRECTION. Directions to which teachers and other students are expected to comply.
	12.	NONE OF THE ABOVE.

FIGURE 1--Continued

DIMENSION THREE

EVALUATIVE MOVES**

13. IDENTIFICATION MOVES. A value object, or a value term, or both are named or identified.
14. DESCRIPTIVE MOVES. Describe the value object in ways that are relevant to the judgment that an evaluator will make about it.
15. RATING MOVES. Ratings of the value object as a complete entity, its characteristics, or instances when the value object is general rather than particular.
16. CRITERIAL MOVES. Explication of the meaning of the value term or with the related process of explicity stating the criteria that govern the use of the value term.
17. RELATIONAL MOVES. Justification of a rating and are extraneous to the criteria.
18. TANGENTIAL MOVES. Moves that provide supplementary information above the value object which is not directly related to its rating.
19. NONE OF THE ABOVE.

*Flanders, Ned A., Analyzing Teaching Behavior (Don Mills, Ontario: Addison-Wesley Publishing Co., 1970), p. 205.

**B. O. Smith and M. Meux, A Study of the Strategies of Teaching (Urbana: Bureau of Educational Research, University of Illinois, 1967), pp. 148-49.

dimension of classroom verbal interaction, Flanders has concentrated on the social-psychological dimensions of classroom verbal interaction. Ned Flanders' initial contribution to research in instruction was a research tool (Flanders Interaction Analysis System) which allow systematic observation of classroom verbal interaction. Flanders' Interaction Analysis System (IAS) was designed to measure the "generalized attitudes toward the teacher and the class that the pupils share in common despite individual differences" (1965, p. 3). Flanders called these "generalized attitudes" the social-psychological classroom climate. Antecedents of Flanders' IAS include: Anderson, 1939; Lippitt and White, 1943; Bales and Strodthick, 1967. See Appendix B for a review of Flanders Interaction Analysis System.

Initially (1965) Flanders' IAS was based on the concepts of direct influence by the teacher (which restricts the student's freedom of action) and the indirect influence of the teacher (which expands a student's freedom of action by encouraging his verbal participation and initiative).

By 1970 Flanders had shifted the emphasis of teacher-student verbal behavior away from indirect-direct to initiative and response. Flanders feels that this is a more parsimonious way to conceptualize the indirect-direct aspects of classroom interaction. Indirect now refers to teacher response with student initiative and direct refers to teacher initiative with a student compliance (Flanders, 1970, pp. 102-104). See Appendix C for a review of Flanders' Modified IAS.

Flanders' teacher-student initiative-response postulates provided another dimension of TOCS--teacher-student talk. Figure I

provides definitions of the teacher-student talk categories. The first cluster in Figure 2 represents Flanders' initial conception of teacher-student talk.

Many researchers have identified teacher-student initiative and response as being important elements of classroom verbal interaction (Amidon and Hough, 1967). And Flanders states:

> Practically every researcher who has analyzed classroom interaction reports various reciprocal relationships between teaching behavior and pupil behavior. Perhaps the most frequently reported is that persistent, active direction on the part of the teacher produces a pattern of pupil response rather than pupil initiation (p. 184).

Continuous teacher initiation tends to restrict the freedom of action of the student, making him dependent on the teacher. The student recognizes no learning problem because the teacher focuses on the content of discussion. The more a teacher structures problems and asks relatively specific questions, the more likely students will complement this behavior by following the teacher's initiative (Flanders, 1965, pp. 8-9). Conversely, the teacher can change the response pattern of the student from compliance to independent action by allowing the student to analyze problems confronting him.

Teacher-student ideas formed another dimension of the tri-dimensional category system used during this study. Figure 1 provides descriptions of behavior categories for the teacher-student ideas dimension. The second cluster in Figure 2 contains Flanders' initial categories. Flanders (1970) postulated that the teacher-student talk dimension is related to the dimension of teacher-student ideas:

FIGURE 2*

FLANDERS' CLUSTERED INTERACTION ANALYSIS SYSTEM

FIRST CLUSTER

WHO IS SPEAKING	Teacher	1. Teacher Responds 2. Teacher Solicits 3. Teacher Initiates
	Pupil	4. Pupil Responds 5. Pupil Solicits 6. Pupil Initiates X. None of Above

SECOND CLUSTER

SOURCE OF IDEAS	Teacher	1. Teacher Direction and Idea 2. Develop Teacher Idea 3. Cite Teacher Idea
	Pupil	4. Cite Pupil Idea 5. Develop Pupil Idea X. None of Above

THIRD CLUSTER

LEVEL OF THINKING	1. Factual Level 2. Comparison Level 3. Analysis Level 4. Generalization Level X. None of Above

*Ned A. Flanders, Analyzing Teaching Behavior (Don Mills, Ontario: Addison-Wesley Publishing Co., 1970), p. 205.

> Teachers can stimulate pupil initiation by reacting to and making use of ideas expressed by pupils and by asking more open questions so as to help pupils express their own ideas part of the time (p. 184).

Responsiveness on the part of the teacher to students' ideas will lead them to greater involvement in class discussions. Students will set goals, and the control of the content is exercised by the student in the structure of what to give attention to. Thus, Flanders feels that the teacher-student talk dimension and the teacher-student ideas dimension are related to student thinking:

> In order to guide a total class discussion toward generalizations and explanations that are proposed by the pupils, rather than by the teacher, considerable time must be devoted to citing specifics, clustering these citations into groups, and speculating about possible relationships between clusters. . . . Only after this 'shared apperceptive mass' of information has been constructed can we expect pupils to develop logical explanations and suggest generalizations (Flanders, 1970, p. 185).

The teacher-student talk dimension and the teacher-student idea dimension were important considerations during this study. If teachers are to provide an atmosphere in which students are given responsibility for making rational decisions concerning important social issues confronting them, then teachers need more information concerning classroom verbal behavior than Meux's Evaluative OAS can provide. For example, teachers need to have information concerning the relationship between the teacher-student talk, the teacher-student ideas and the evaluative moves dimension.

Three modifications were made of Flanders' initial categories: (1) In the "Who is speaking" cluster, Flanders included teacher-

students solicits categories--categories 2 and 5. See Figure 2. In TOCS, teacher-student soliciting behavior was included in teacher-student initiative--categories 2 and 4. See Figure 1. (2) In cluster two "Source of Ideas" Flanders did not include student directions. A student direction category was included in TOCS on the assumption that students would give directions, and (3) none of the categories in Flanders' third cluster "Level of Thinking" was used in TOCS.

The findings of Meux related to the cognitive dimension, and Flanders postulates concerning the teacher-student talk dimension, and the ideas dimension pointed to the possibility of a conceptual and procedural extension of Meux's study of teacher-student verbal interaction during normative classroom discussions. These considerations and the practical considerations of accessibility of Grade Ten social studies classrooms establish the direction and bounds of this investigation.

Problem

This study investigated the problem: What relationships exist between the teacher-student talk dimension, the teacher-student ideas dimension, and the evaluative moves dimension when a tri-dimensional descriptive analysis is made of teacher-student verbal interaction during evaluative ventures?

Research Questions

Because of the purpose, the research findings, and the postulates underlying this study, the analysis of the relationships between the teacher-student talk dimension, the teacher-student ideas dimension, and the evaluative moves dimension was guided by four research questions:

1. Were there significant relationships between the teacher-student talk dimension and the evaluative moves dimension?
2. Were there significant relationships between the teacher-talk dimension and the teacher-student ideas dimension?
3. Were there significant relationships between the teacher-student ideas dimension and the evaluative moves dimension?
4. Were there significant relationships between the teacher-student talk dimension, the teacher-student ideas dimension, and the evaluative moves dimension?

Scope and Limitations

This study was a natural history investigation of the relationships between three dimensions of the verbal interaction (teacher-student talk, teacher-student ideas, and evaluative moves) displayed by teachers and students engaging in normative discussions in Grade Ten social studies classrooms. To facilitate the collection of data and the analysis of the relationships between these three dimensions, a Tri-Dimensional Observation Category System (TOCS) was constructed by using behavioral categories adapted from Meux's Evaluative OAS and

Flanders' Clustered IAS.

Limitations which may have had a bearing on this study were:

(1) The population observed during this study was neither a random or representative sample of teachers, students, classrooms, or schools. Subjects for this study were ten teachers and their students in Grade Ten social studies classrooms. The selection of this population was made on the basis of Edmonton Public School officials' recommendations, and teachers' willingness to participate in the study.

(2) The presence of audio recording equipment, an outside observer, and pre-selected lessons are influences that are not part of the normal classroom routine. The contaminating effects of these outside variables are not known.

(3) While inter-observer reliability was determined by coefficient of agreement between two observers, the study was conducted by one investigator. This introduces the possibility of unintentional influences affecting the results of the study.

Definitions of Terms

The statement of the problem identified three dimensions of classroom verbal interaction, teacher-student talk, teacher-student ideas, and the evaluative moves dimensions. These terms along with other terms important to this study are defined below.

Interaction analysis was defined as an observation procedure designed to permit systematic analysis of teacher-student verbal behavior.

Natural history study. For this investigation a natural history study was defined as a descriptive analysis of the relationships between three dimensions of teacher-student verbal interaction during evaluative ventures under normal classroom conditions.

Normative classroom discussion. For this study normative classroom discussion was defined as classroom verbal interaction which is focusing on instructional material, discussion topics, or evaluative concepts involving value judgments which "may be defined as those judgments which rate things with respect to their worth" (Coombs, 1970, p. 2).

Teacher-student talk dimension was defined as the first affective dimension in TOCS designed to differentiate teacher initiative and student response by the use of categories 2 and 3, and student initiative and teacher response by the use of categories 4 and 1. Teacher-student ideas dimension was defined as the second affective dimension in TOCS designed to differentiate as to whether the substance of a statement was attributed to the teacher--categories 6, 7, and 8--or to the student--categories 9, 10, and 11--regardless of who is speaking. The evaluative moves dimension was defined as the third dimension of TOCS. This dimension contained seven categories which were used to describe the cognitive verbal interaction of teachers and students engaged in normative discussions.

Tri-dimensional observation category system. An observation system composed of more than two dimensions in which verbal behaviors were defined in terms of categories that are mutually exclusive. The categories were designed in specified order so that units of behavior

would be recorded within defined limits of classroom verbal interaction.

Significance of the Study

There is evidence that citizens groups, teachers, students, and school officials are becoming concerned about values instruction. At the same time, there is controversy over how social studies teachers should proceed with values instruction. Coupled with these two issues is the fact that very little research has been conducted in classrooms as teachers and students interact during normative discussions (Raths, 1966, pp. 205-206). Therefore, this study will have significance if the findings provide suggestions for further empirical studies of teaching.

CHAPTER II

REVIEW OF RELATED LITERATURE

In Chapter II literature related to the purpose of this study was reviewed. Hyman (1968, p. 3) warns that investigating teaching requires the researcher to formulate a particular orientation towards his subject. The orientation in this study concentrated on teacher-student cognitive and affective verbal interaction during actual teaching situations. Therefore, the literature reviewed for this study focused on: (1) viewpoints attempting to define teaching. These viewpoints provided the basis for a model of instruction that incorporated classroom verbal interaction as one of its components, and (2) research projects related to teacher-student verbal interaction.

Viewpoints On Teaching

One of the central concerns of Educational Research is the study of teaching. However, research in teaching is characterized by a paucity of well established knowledge, and an inconsistent theoretical base. Two historical perspectives have contributed to this situation: (1) the lack of an adequate definition of teaching, and (2) the relation of teaching to learning (Hyman, 1968, pp. 6-8). Three sample definitions of teaching will serve to illustrate the first historical perspective:

1. Oakeshott: Teaching is a practical activity in which a "learned" person "learns" his pupils (1971, p. 13).

2. Gage: By teaching, we mean, . . . any interpersonal influence aimed at changing the ways in which other persons can or will behave (1963, p. 94).

3. Scheffler: Teaching may be characterized as an activity aimed at the achievement of learning and practiced in such a manner as to respect the student's intellectual integrity and capacity for independent judgment (1965, p. 132).

The definitions of Oakeshott and Gage encompass more than Scheffler's. However, Oakeshott's term "learned" person is vague, and how might a "learned" person learn his pupils? Gage's definition allows for indoctrination. Scheffler's definition of teaching is more precise than Oakeshott's or Gage's in that teaching is "aimed at the achievement of learning." However, what is meant by intellectual integrity is unclear. Diverse definitions such as these led Mitchell (1966) to declare:

> In short, though we have gone some way, it is not very far, and it would appear that we still have a very long way to go. There is, I believe, an enormous amount yet to be done to distinguish clearly the processes employed in teaching and to give greater precision to our conception of what teaching signifies (p. 163).

The second historical perspective that led to difficulties, in terms of defining teaching, has been the reciprocal conception of "teaching-learning." Undue stress on the "teaching-learning" reciprocal concept resulted in the study of learning and in the development of theories of learning which would make it possible to determine how best to teach. Eisner (1964) commenting on the teaching-learning perspective wrote:

> The progressives . . , formulated answers to these questions a number of years ago. Teaching and learning were to be considered reciprocal processes, something like buying and selling. Surely one could not buy something unless somebody was willing and able to sell--and one could not sell unless someone bought. To teach meant that learning occurred. A teacher whose activities in the classroom did not result in learning might be engaged in telling or in talking . . . but he certainly was not engaged in teaching (p. 115).

In recent years researchers have begun to look anew at teaching (Smith, 1967; Meux, 1967; Bellack, 1966; and Hyman, 1968). They emphasize that the teacher's activities, whether or not the student learns, make up teaching.

Phillip W. Jackson (1962) attempted to get at the heart of teaching by describing teaching as it in fact occurs. Jackson pointed to the lack of success of researchers when they focused on the "good" teacher. He postulated that to understand what occurs in the interaction between teacher and student it is necessary to understand what goes on before as well as what happens during the "interactive" teaching situation. Jackson labelled the before part of teaching as "preactive" teaching."

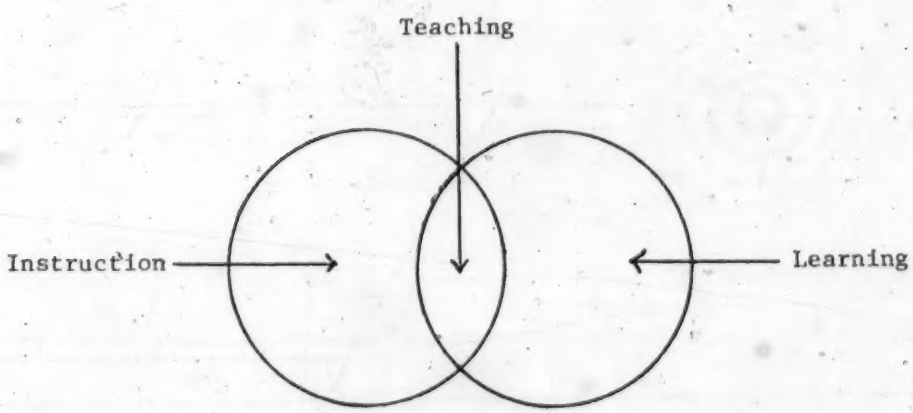
> . . . the label 'preactive' teaching . . . commands our attention and helps us distinguish this class of behavior from the 'interactive' teaching activities that occur vis-a-vis the students (Jackson, 1962, p. 11).

Clearly, Jackson's paradigm is both helpful and restrictive. It is helpful in that he reminded researchers that teaching is more than unidimensional. The paradigm is restrictive because other components are missing. Recognizing this, Eisner (1964) proposed a three-component view of teaching. Teaching and learning were major components of his paradigm. However, he added the term instruction

to help explain the relationship between teaching and learning (Figure 3 represents Eisner's paradigm).

FIGURE 3

A PARADIGM OF INSTRUCTION, TEACHING, AND LEARNING



In Eisner's paradigm teaching activities are described as that portion of instruction which is effective in moving pupils toward the attainment of educational objectives resulting in learning. Instruction is that group of activities planned and executed which are intended to result in learning. In this sense instruction is related to the concept of teaching developed by Smith (1960, pp. 229-230).

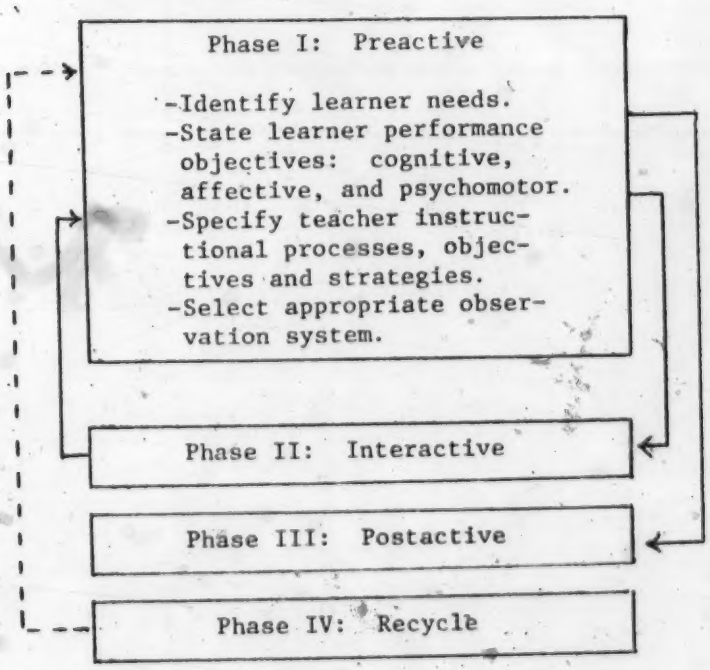
Aoki (1970; 1971), using Johnson's (1967) initial concepts carried Jackson's and Eisner's views a step further. Aoki's model consisted of two systems designed to clarify teaching: (1) a curriculum development system, and (2) an instructional system. A curriculum

development system consists of intended learning outcomes (ILO's) and is an input into an instructional system. An instructional system consists of three Phases of teaching: a Preactive Phase, an Interactive Phase, and a Postactive Phase.

By adding an additional component to Aoki's instructional system, a scheme for analyzing teaching was developed to fit the purpose of this study. The additional component is called the Recycle Phase. Figure 4 represents a scheme for analyzing teaching:

FIGURE 4

A FOUR PHASE SYSTEM FOR ANALYZING TEACHING


Phase I: Preactive
-Identify learner needs.
-State learner performance objectives: cognitive, affective, and psychomotor.
-Specify teacher instructional processes, objectives and strategies.
-Select appropriate observation system.
Phase II: Interactive
Phase III: Postactive
Phase IV: Recycle

Phase I has four steps: (1) identification of learner needs, (2) specification of learner performance objectives which if attained will eliminate identified needs, (3) specification of methods and/or procedures that can be utilized to bring about an attainment of the performance objectives, and (4) identification of a systematic observation system to be used to collect information to determine whether or not the teacher ultimately implements his planned program from step number three.

During Phase II the systematic observation system identified in step number four, the preactive phase, is used to collect information related to the teacher's methods and techniques to determine if the planned program has been implemented. If the collected information shows the teacher is not implementing his plan, the teacher may elect to either change the original learner needs and performance objectives that he is teaching toward or he may elect to revise his teaching.

Phase III involves the assessment of the learner's performance according to the measurement specified in the performance objectives. Upon the completion of an assessment of the learner's performance, decisions can be made concerning the attainment of the specified performance objectives.

In Phase IV the teacher proceeds back to the preactive phase to consider new learner needs and consequently new performance objectives in the planning for future teaching and learning activities in the next cycle. In addition the teacher may revise or continue to implement previously implemented teaching activities depending on the

results compiled from the identified observation system.

The Four Phase System for Analyzing Teaching suggests several research possibilities. For example, if we are to understand the interaction between teacher and student, what must we understand about what goes on before and after the Interactive Phase of teaching? Or, how are student needs assessed, and if gaps are found in fulfilling student needs during Phase II, how can the gaps be corrected? Another approach could be to set up models to assess how best to choose objectives, and how best to establish criteria for measuring student outcomes on specified objectives. Also, Phase II offers many other research possibilities. One of these possibilities was investigated during this study, namely, the relationships between teacher-student cognitive and affective verbal interaction during evaluative ventures.

Literature Related to the Interactive Phase of Teaching

Observing and analyzing teacher-student verbal communication during the Interactive Phase of teaching has been carried out since the late 1930's (Anderson, 1939; Lippitt and White, 1943; Withall, 1949; and Perkins, 1968). Flanders (1969, p. 142) notes that recently there has been an upsurge in the number of studies analyzing classroom verbal interaction. One reason for such dynamic growth has been the development of observational systems for analyzing verbal interaction--Simon and Boyer list sixty-seven observation systems which deal with communication in the field of Education (1970, p. 8). Literature reviewed for this section of Chapter II concentrated on:

affective systems, cognitive systems, multidimensional systems, and values studies.

1. Affective Systems

Withall (1949) developed a Climate Index to measure the social-emotional impact of teacher statements on student behavior. His observation system contained seven categories: (1) learner-supportive, (2) accepting and clarifying, (3) problem-structuring, (4) neutral, (5) directive, (6) reproving, and (7) teacher self-supporting. Categories 1, 2, and 3 reflect learner-centered behavior, and categories 5, 6, and 7 describe teacher-centered behavior.

Withall applied the Climate Index to a random sample of eight seven-minute recorded sessions of five classes conducted by four teachers of art, mathematics, and Latin. Withall found that teachers displaying a learner-centered climate used a larger proportion of learner-supportive, accepting and clarifying statements, and had the lowest proportion of directive, reproving, and self-supportive statements. Teachers that were classified as teacher-centered tended to devote large portions of their verbal statements to problem-structure and directive statements.

Flanders (1965) developed FIAS for observing classroom climate. This well-known category system was designed for classifying teacher verbal behavior that reflects degrees of freedom which allows students to think and act for themselves and teacher verbal behaviors which tend to restrict the students. These two styles he called indirect and direct teaching.

Using FIAS, Flanders (1955) studied the verbal behavior of 34 New Zealand elementary teachers. He followed the same procedure (1965) with 34 eighth and ninth grade English and Social Studies teachers in the Minneapolis public schools. Results from both studies indicated that students of indirect teachers had higher levels of attitude development (.01 level). The 1965 study revealed that students of teachers employing "an above-average proportion of direct influence consistently showed less achievement" (p. 109). This study also showed that indirect teachers were more flexible than direct teachers in that indirect teachers changed their behavior patterns over time.

Hughes (1962) developed a system similar to Withall's in that her categories focused on teacher functions. Hughes divides teacher functions into seven categories: controlling, imposition, facilitating, developing content, response, positive affectivity, and negative affectivity. One of Hughes' basic assumptions is that teacher verbal behavior is a determining factor of a student's level of thinking: "It was suggested that responsiveness on the part of the teacher to children's remarks, questions, personal experience would lead them to greater involvement in content and stimulate use of higher mental processes" (p. 258). In a study Hughes (1962) observed 41 elementary school teachers in Utah. Results did not support her theory. Hughes found that the median proportion of controlling acts was 46 percent in over half the acts they performed. Seventy-four percent of all records had 20 percent or less of teaching acts falling in categories for exploration, amplification, utilization of students' questions and

remarks, evaluation and stimulation. Teachers also gave little criteria for positive evaluation acts.

2. Cognitive Systems

Bellack, et al., (1966) developed a system for analyzing logical discourse. This system allowed investigators to analyze units of discourse called moves. Bellack used the idea of moves to create a concept of a teaching cycle, which makes it possible to discuss patterns of classroom verbal behavior. Verbal moves are classified in terms of functions they perform in classroom discourse: (1) structuring, (2) soliciting, (3) responding, (4) reacting. He also designed the system so that classroom discourse could be analyzed in terms of types of content meanings: (1) substantive, (2) substantive-logical, (3) instructional, and (4) instructional-logical.

Using the Teaching Cycle Category System, Bellack conducted a study in high school economics classes. The sample consisted of tape recordings of four lessons involving 345 10th and 12th grade students, and 15 teachers. Bellack found that teacher verbal behavior dominated pedagogical moves. Teachers solicited 86.0 percent, responded 12.0 percent, structured 86.0 percent, and reacted 81.0 percent of the time. Teachers also dominated the initiation of teaching cycles, 85 percent. The basic verbal interchange in the classroom was soliciting-responding. Two-thirds of the lines dealt with substantive material, and substantive-logical meanings employed one-half of all moves.

Achievement test results revealed that those classes judged high on test results were taught by teachers who were "less active

in terms of percentage of lines spoken than are the teachers in the low groups. In the high groups, no more than 61.5 percent of the lines were spoken by any of the three teachers" (p. 225). In terms of the logical elements of soliciting moves, Bellack's analysis revealed that teachers of low groups required students to respond to solicitations with facts 26.9 percent of the time. Responding factual moves in the high group occurred 17.9 percent.

Gallagher and Aschner (1963) designed a Reciprocal Category System based on Guilford's description of the intellect. They sought to analyze the cognitive dimensions of classroom verbal interaction by the types of questions asked by the teacher. With their system verbal behavior is classified in five categories: (1) cognitive memory, (2) covergent thinking, (3) divergent thinking, (4) evaluative thinking, and (5) routine. During an empirical study, in which productive thought processes in gifted children was investigated they found that long periods of teacher clarifying student ideas was needed before students could grasp the point of the topic under discussion. Also, that it was the teacher that set the pattern for divergent thinking:

> In those sessions during which the teacher asks for more divergent production, the percentages of responses in this area are correspondingly high. When the amount of divergent production requested stays below 5 percent, the decrease in divergent production by the students is marked (p. 192).

A general conclusion reached by Gallagher and Aschner was that students respond in terms of cognitive memory, taking their cues from rigid patterns of teacher stimulation (p. 190).

3. Multidimensional Systems

Taba (1964) designed a study in which twenty elementary teachers were trained in a model of thinking, and the instructional strategies for implementing the model. The study was based on the assumptions that maturation of thought follows an evolutionary sequence, and, that classroom discourse is cyclical in nature. Using a multiple coding system, Taba was able to represent the flow of classroom interaction by recording the sequences of transactions between teachers and students; the changes in the level of thought; and the relationships between strategies, level, and direction of thought.

Analysis of typescripts revealed that the level of student thinking was influenced:

> . . . by the whole pattern of transaction: the particular combination of focusing, extending, and lifting; the timing of these acts; the length of time spent on a particular focus, . . . the distance between the mental operations of the students at the moment from the level required by the teacher, and the points at which the teacher seeks information from students and gives it (p. 533).

The importance of this statement is that it gives some support to the notion that any attempt to raise the level of thought beyond student maturation early in class discussions will cause the students to retire to a lower level of thought.

Oliver and Shaver (1966) presented two teaching styles for teaching public issues. They wanted to determine if teachers could assume and manipulate Socratic Analysis and Recitation Analyses teaching styles, and if variations would occur within each style. Findings indicate that teachers were able to operate within the two

teaching styles at .001 level of significance. Differences occurred among teachers in the affective and cognitive categories when teachers used the same style. The differences ranged from .05 to .001 level of significance. Achievement tests results showed the two groups taught by the two styles had similar test results. They conclude that the ability of the two groups "had a systematic effect regardless of the style used by the teacher" (p. 302).

Gallagher (1968) reported a study of verbal interaction of six biology teachers and their students. He designed the study so that the personal style of the teacher would be the main variable that controlled performance. Using his Topic Classification System he analyzed three dimensions of classroom verbal behavior. Gallagher found significant differences among teachers in the number of topics in content vs. style and on the conceptual level--data, concept and generalization. He also found significant differences among classes in the percentage of teacher talk devoted to the cognitive styles of description, explanation and expansion.

Zahorik (1966) designed a multiple category system to investigate teacher-verbal feedback in fifteen elementary schools during current events reading lessons. The lessons were divided into two parts: pre-reading and post-reading. Results revealed that teacher feedback was narrow in scope. The most frequent type of feedback used was approving answers of students and calling for a new topic. The second most frequently used type of feedback was asking students to develop his response further. During the later stages of discussions teachers tended to use "praise-confirmation"

and "several-answers solicitation."

4. Values Studies

A number of methodological and conceptual plans for value analysis have been developed. Some of these strategies have focused on group processes. For example, Columbia Associates in Philosophy (1923) developed a plan for systematically evaluating ends in relation to their contributions to other ends. Another approach to value questions was offered by Raup, et al. (1950) to explicate problem-solving enterprises by focusing on intergroup processes. Benjamin Cardozo (1961) presented an ajudication method for arriving at value judgments. These methods of valuation seem to offer promising approaches for social studies instruction, but empirical investigations need to be undertaken before practical application.

Smith and Meux (1962; 1967; 1970) and Meux (1967) have reported results of their investigations of teacher-student cognitive verbal interaction during evaluation ventures. In their 1967 study they found that strategies for teaching values involved 21 forms of input behavior. These forms or moves are categorized in six groups: identification, description, rating, criterial, relational, and tangential.

Meux, et al. (1967) conducted an exploratory study using 303 11th grade students. The purpose of the study was to investigate the effects of "different kinds and degrees of support for a particular kind of rating move" (p. 1). In each school students were randomly assigned to types of presentation and to one of four strategies: Core,

authority, analogy, and criteria. Results indicated that the criterion groups reacted "negatively to fluoridation and the use of pesticides more than the other three groups" (p. 28). They also gave better reasons for refraining from using pesticides. Two other studies designed within the conceptual framework of Smith and Meux (1967) show promise. Chadwick (1970) has developed a procedure for personal interviews, and Casper (1970) designed a programmed text.

In terms of using category systems for observing teacher-student verbal behavior during values analysis, with the exceptions of Smith and Meux and Oliver and Shaver, very little empirical investigation has been conducted. Lang (1962) studied what effects counseling techniques had on helping college students understand and clarify their values, and if understanding had any relationship to behavior patterns. Gagnon (1965) conducted a study that was designed to help elementary teachers assist their students in learning how to think and clarify values. No attempt was made to analyze classroom verbal patterns. Simon (1958) reported a study in which ten high-school teachers were taught to use the value-clarifying process. Each teacher selected a student that exhibited a pattern of "non-value-based behavior" and used the value clarifying process to help the student change his behavior. She found that teachers could not use the value clarifying process effectively and most of the students did not change their behavior.

White (1966) studied the relationship between values and success in student teaching. He found that values had no significant relationship to success in student teaching. Raths (1960) studied 38 high school underachievers. He based his study on the assumption that

underachievement was related to a failure to develop certain values. He found that the clarifying procedure used with the experimental group had an effect of increasing their achievement.

In reviewing studies that have used observation category systems several important points come to light. First, student achievement tends to be higher in those classrooms where teacher influence is flexible (Flanders, 1965). Second, the level of thinking on the part of the student is related to the level of thinking of the teacher (Taba, 1964; Aschner and Gallagher, 1968). Third, teachers in general do not use student ideas, and student initiation and independent thinking are not encouraged in classroom dialogue (Withall, 1949; Hughes, 1968; Bellack, 1966; and Urback, 1966). Fourth, most category systems provide analysis of one dimension of classroom verbal interaction (Urback, 1966; Smith and Meux, 1967; and Flanders, 1965). And fifth, multi-dimensional observation systems provide investigators with a more powerful analysis of classroom verbal interaction (Zahorik, 1966 and Taba, 1964). This suggests that more emphasis could be given to observation systems that have the capability of providing data on more than one dimension of classroom verbal interaction.

Summary

In Chapter II a review of literature related to this study was undertaken. The first part of the review dealt with the need of defining teaching; a model of teaching was presented that suggested that the interactive phases of teaching could be an important research area. In the second part of the review studies which were important

to the interactive phases of teaching and which were important to the purpose of this study were presented.

CHAPTER III

RESEARCH PROCEDURES AND METHODOLOGICAL CONSIDERATIONS

To accomplish the purpose of this study TOCS was constructed to aid in the coding of teacher-student verbal interaction during evaluative ventures. To insure that a reliable and valid record of the verbal interaction exhibited by teachers and students was obtained, the present observation system (Figure 1) allowed for clear understanding of what behaviors were to be observed and coded. This meant that TOCS had to comply to certain criteria.

Kerlinger (1967, pp. 506-514) cites five criteria an observation system must meet. (1) The "categories must be exhaustive and mutually exclusive" (p. 508). Exhaustiveness is satisfied when the "universe" of behaviors to be observed is defined. The observation system used in this study was broken into subsets, called dimensions, to meet this requirement: teacher-student talk, teacher-student ideas, and evaluative moves. To satisfy "exclusiveness" each dimension contained categories that were behaviorally defined. See Figure 1 for category definitions. Each category represented a behavior that was to be observed, and each category applied to only one behavior. Furthermore, to make the TOCS really exhaustive a miscellaneous category--none of above--was added to each dimension (Flanders, 1970, p. 171).

(2) Validity and reliability. An observation instrument has no value unless some form of validity can be established. It was appropriate

for this study to establish content validity. Content validity was defined as determining the extent to which the coding undertaken by the two observers used during this study could be correlated with some outside criteria. Content validity was established by selecting one sample for each of the evaluative moves categories, and then comparing each sample evaluative move with a like sample that was identified and coded by Meux during his initial study of evaluative ventures (1967, pp. 149-161).

Listed below are evaluative moves found by Meux. Immediately following each of Meux's sample moves is an example of a similar evaluative move that occurred during the present study.

1. (Meux) Identification Move

   Teacher: Is it fair for an author to use emotional appeal in which to promote his argument?

   In this move the teacher has identified the value object, "the use of emotional appeal by an author to promote his argument."

   (Hanson) Identification Move

   Teacher: OK, you can say anything you have to say on the articles, and stick pretty well to the facts at hand.

   In this move the teacher has identified the topic of discussion--the killing of moose by American hunters.

2. (Meux) Descriptive Move

   Student: He (Adams) didn't pay much attention to other people. He didn't change his decisions. His decisions were made

on what he felt was the thing to be done and he more or less ignored what others felt.

The student is describing the mode of decision making that characterized Adams when he was president.

(Hanson) Descriptive Move

Student: What puzzles me is that they came across the border with all this expensive equipment, trucks, Land Rovers and all that, ah, why didn't, ah, Customs catch them then.

The student is describing the actions of Customs officials.

3. (Meux) Rating Move

Student: I think you had a very good report.

The student is praising another student for a good report.

(Hanson) Rating Move

Student: What did I think of it? I thought it was stupid.

The student is giving a rating of American hunters killing moose illegally.

4. (Meux) Criterial Moves

Teacher: You know, there's a difference in the definitions of terms here, don't you? You define 'strong presidents' as self-willed and usually defiant. But Jack has defined it as the president is strong in his ability to get his own program across.

In this move presidents are defined "good" if they are self-willed, defiant, or can get their programs across.

(Hanson) Criterial Moves

Student: I think I would even be more mad if they were Canadians. Canadians are supposed to be more aware. They are supposed to be trying to keep our game going instead of slaughtering them all the time.

In this statement the student is substantiating a rating given earlier that the students would be more incensed if Canadian hunters killed moose illegally.

5. (Meux) Relational Move

Teacher: Well, Jack, if he was such a strong president, how do you explain that he accomplished very little in his four years.

In this move the teacher is asking the student to explain his position in light of new evidence.

(Hanson) Relational Move

Student: Well, I don't mind. Americans coming up here, I mean I don't have anything against Americans, they can shoot moose, too, along with Canadians.

Here the student was giving a discordant characteristic that was contrary to a previous rating that it would be good to ban Americans from hunting in Alberta.

6. (Meux) Tangential Move

Teacher: Well, I have not had this experience as far as you are concerned, but I have heard from the principal on occasion when some student felt that I had been unfair or

> that I had misunderstood something. The appeal, in most cases, has been an emotional one, and very often when the three of us get together and work out the reason for the two mark instead of the one mark, we become intellectual and analyze the problem properly. Sometimes it turns out that the mark wasn't so bad after all.

In this case an emotional appeal is given, but it is not an instance of an author using an emotional appeal.

(Hanson) Tangential Move

Student: Well, you know, like Tim said "they came up and shot them deliberately," well anybody that gets a moose license and goes out and shoots moose does it deliberately.

In this instance the student was talking about deliberately shooting moose which was not relevant to the value object that was under discussion at the moment.

A comparison of the above results indicates that the coding undertaken during evaluative moves by the observers used in this study was valid because the moves can be matched with Meux's coding procedures.

Reliability of an observation system "is a simpler matter, though by no means an easy one" (Kerlinger, 1967, p. 507). Kerlinger goes on to state: "the reliability of observations can be estimated by correlating the observations of two or more observers" (1967, p. 507). In this study, Scott's coefficient formula was used to determine observer agreement between two observers. Flanders (1965) suggests that Scott's

coefficient formula was used to determine observer agreement between two observers. Flanders (1965) suggests that Scott's coefficient is unaffected by low frequencies, can be adapted to percent figures, and is more sensitive at higher levels by reliability:

> Scott calls his coefficient "pi" and it is determined by the two formulas below:
>
> Formula I: $$\pi = \frac{Po - Pe}{1 - Pe}$$
>
> Po is the proportion of agreement, and Pe is the proportion of agreement expected by chance, which is found by squaring the proportion of tallies in each category and summing these over all categories.
>
> Formula II: $$Pe = \sum_{i=1}^{k} P_i^2$$
>
> In Formula II there are k categories and Pi is the proportion of tallies falling into each category. π, in Formula I, can be expressed in words as the amount by which the tallies of two observers exceeded chance agreement, divided by the amount by which perfect agreement exceeds chance (Flanders, 1965, pp. 25-26).

Flanders cautions that error is increased with decreasing frequency of a particular category (1965, p. 30). However, he has found a Scott coefficient of 0.85 or higher as being an adequate level of observer performance. Interobserver reliability coefficients for this study will be found in Figure 5.

Figure 5 represents reliability coefficients for ten of the twenty teachers used in this study. Each of the ten were selected at random. So that each member of the population received an equal chance of being selected, a table of random numbers was used (Wert, Neidt, and Ahmann, 1964, p. 109). Teachers 1, 2, 4, 6, 7, 11, 15, 16, 18, and 20 were selected. An inspection of Figute 5 shows six columns. Column

FIGURE 5

INTEROBSERVER RELIABILITY COEFFICIENTS

Teacher	Dimension	"Pi"	Percentage of agreement between observers	Percentage expected agreement by chance	Total number of occurrences
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
1	1	0.89	0.91	0.25	726
1	2	0.87	0.92	0.33	726
1	3	0.91	0.93	0.21	726
2	1	0.87	0.90	0.20	770
2	2	0.86	0.91	0.32	770
2	3	0.89	0.92	0.22	770
4	1	0.89	0.92	0.26	700
4	2	0.88	0.92	0.30	700
4	3	0.87	0.91	0.27	700
6	1	0.87	0.91	0.28	700
6	2	0.86	0.94	0.56	700
6	3	0.89	0.92	0.25	700
7	1	0.88	0.91	0.23	490
7	2	0.88	0.92	0.28	490
7	3	0.88	0.92	0.30	490
11	1	0.86	0.91	0.31	625
11	2	0.84	0.92	0.49	625
11	3	0.85	0.90	0.30	625
15	1	0.87	0.91	0.27	700
15	3	0.90	0.92	0.23	700
16	1	0.87	0.91	0.30	700
16	2	0.88	0.92	0.29	700
16	3	0.89	0.92	0.25	700
18	1	0.86	0.91	0.35	612
18	2	0.88	0.92	0.27	612
18	3	0.88	0.92	0.29	612
20	1	0.87	0.90	0.28	700
20	2	0.87	0.90	0.22	700
20	3	0.88	0.91	0.24	700

one lists the teachers selected. Column two indicates the dimension that was used to determine reliability. The number of occurrences for an entire dimension were used in the reliability calculations. "Pi" coefficients are listed in column three. Column four contains the actual percentage of agreement between the two observers. Percentage of expected agreement by chance is in column five. And, the total number of occurrences for each dimension is given in column six. An inspection of the "pi" coefficients indicates adequate interobserver reliability was accomplished. All reliability coefficients were at or above 0.85 except for the observations made on teacher 11 dimension two.

(3) A category system can be either molar or molecular. Molar systems are designed to measure "large behavioral wholes as units of observation. . . . The molecular approach, by contrast, takes smaller segments of behavior as units of observation" (Kerlinger, 1967, p. 510). The observation system used in this study was molar. For example, all teacher initiative verbal behavior in Dimension One: teacher-student talk, was coded in category 2.

(4) Observation instruments are divided into low or high inference systems. Molecular systems require low inference on the part of observer. Molar systems require a higher degree of inference. Kerlinger (1967) feels that molar systems are more useful than molecular systems:

> Systems with higher degrees of inference required of the observer are more common and probably more useful in most research, especially in most educational research. The high inference observation system gives the observer

> labeled categories that require greater or lesser interpretation of the observed behavior (p. 511).

High inference systems would seem to lessen observer reliability because of the variability that might occur between observers, but Flanders feels that this need not be the case:

> There is a theory of the 'unbiased, biased observer.' The observer is biased in the sense that his categorization must be consistent with his general assessment of the teacher's intent for a given sequence of action. He is unbiased in that he remains open to all evidence that the general intent of the teacher may be changing (1965, p. 24).

The two observers used to code verbal behavior during this study needed to remain alert to momentary shifts in verbal interaction. For example, if teacher initiative shifted from closed questions to open questions, "How do you feel about that" or "Would you like to comment further?", the observers had to take into account the teacher's intent to let the student develop his own ideas.

(5) The method used to sample behavior. Procedures for using an observation instrument for coding classroom verbal interaction must specify how often observers are to categorize behavior (Kerlinger, 1967, pp. 512-513). The unit for sampling classroom interaction during this study was a three-second time interval.

The selection of a three-second time interval as the unit of sampling behavior was undertaken to help satisfy validity. Kerlinger states that time samples "have the important advantage of assuring the investigator of obtaining representative samples of behavior" (1967, p. 513). And, Medley and Mitzel (1963) feel that for observations to be valid, representative samples of behaviors to be measured must be

observed, accurate records must be obtained, and records must be scored so as to reflect differences in behavior (p. 250). Therefore, to help insure validity, two coders rigorously adhered to the following procedures: first, they independently coded all evaluative moves categories. This was accomplished by coding evaluative moves on verbatim typescripts. The evaluative moves were then transferred, as interval data, to the Evaluative Moves Dimension. The Evaluative Moves Dimension made up the Third Dimension of the Tri-dimensional Observation System used in this study. The Evaluative Moves Dimension (categories 13-19) is displayed in Figure 6--Sample Coding Display. The observers then coded all interaction in Dimension One: teacher-student talk. Following that the observers coded verbal interaction in Dimension Two: teacher-student ideas. A three-second time beep was superimposed on each tape recording to insure consistency of coding.

Data Collection Procedures

Population and Sampling

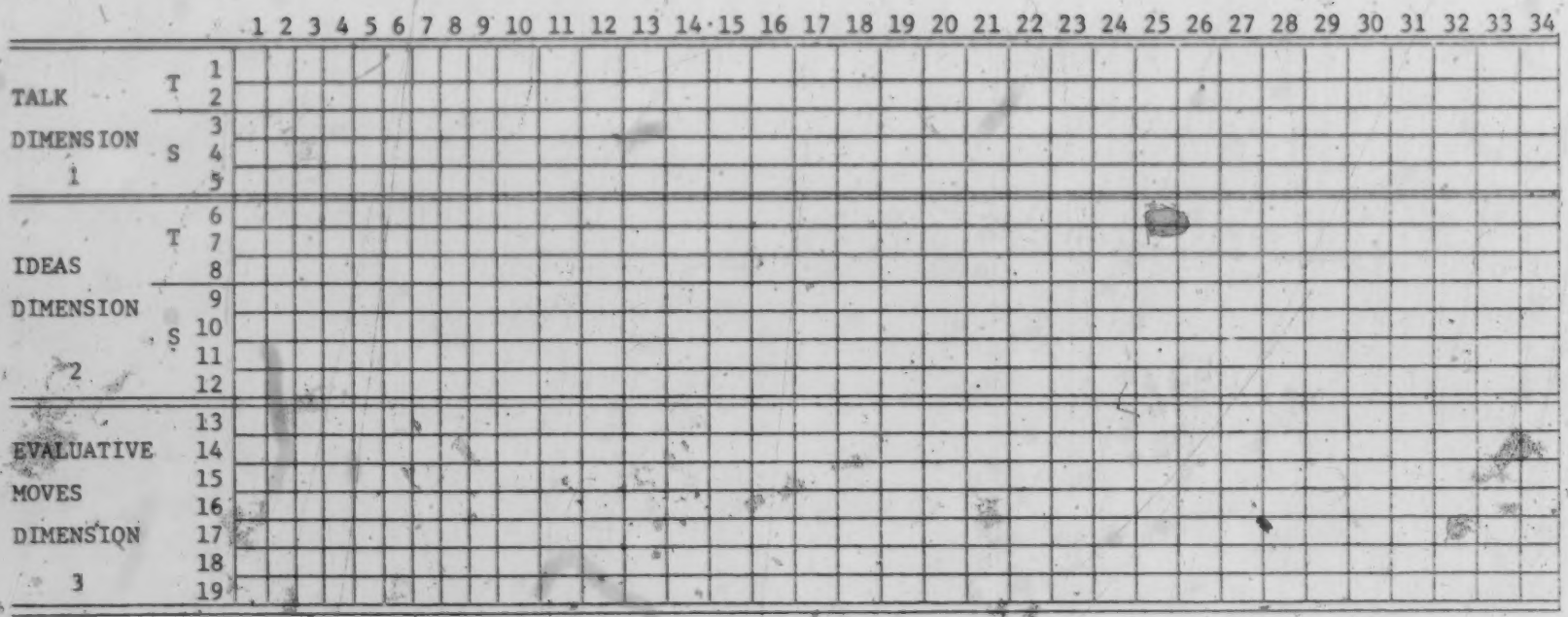
The selection of population for this study was dependent on two criteria: (1) the willingness of high school social studies teachers to participate in the study, and (2) recommendations of Edmonton School Board officials. The population consisted of ten teachers and 563 Grade Ten students under their direction. Each teacher was observed teaching two separate classes.

Observation Procedures

Data obtained for sampling behavior was gathered by recording

FIGURE 6

SAMPLE CODING DISPLAY



*Adapted from Ned A. Flanders, Analyzing Teaching Behavior (Toronto: Addison-Wesley Publishing Co., 1970), p. 207.

T = Teacher

S = Student

verbatim teacher-student verbal interaction in twenty classrooms. In order to minimize the effects of observation, a preliminary recording session was conducted. By conducting a "trial run" it was anticipated that teachers and students would become acclimatized to the presence of electronic equipment and an outside observer. After each recording session, the investigator and the cooperating teachers met for a play-back session. This was a necessary procedure in that any irregularities found in the audio-recordings had to be explicated. Anecdotal records were made of the irregularities.

To insure that verbal interaction was preserved, a Sony TC-105 with two microphones connected to a microphone Sound Mixer (Model 68) was used to record each class session. During a preliminary recording session in two Grade Ten social studies classes, it was found that two microphones--one directed toward the teacher and one directed toward students--connected to the Sound Mixer provided audio-recordings of high quality sound reproduction.

Length of Recording Sessions

It was anticipated that because Grade Ten social studies classes in the Edmonton Public Schools were scheduled in blocks of eighty minutes, that each observation would last approximately 45 minutes. This procedure was selected because of the following: (1) the first 15 to 20 minutes of the class period would be used by the students to read the content to be discussed, (2) teachers would need to perform normal classroom clerical tasks, such as settling students down, making assignments for the following day, and explaining the reading assignment,

verbatim teacher-student verbal interaction in twenty classrooms. In order to minimize the effects of observation, a preliminary recording session was conducted. By conducting a "trial run" it was anticipated that teachers and students would become acclimatized to the presence of electronic equipment and an outside observer. After each recording session, the investigator and the cooperating teachers met for a play-back session. This was a necessary procedure in that any irregularities found in the audio-recordings had to be explicated. Anecdotal records were made of the irregularities.

To insure that verbal interaction was preserved, a Sony TC-105 with two microphones connected to a microphone Sound Mixer (Model 68) was used to record each class session. During a preliminary recording session in two Grade Ten social studies classes, it was found that two microphones--one directed toward the teacher and one directed toward students--connected to the Sound Mixer provided audio-recordings of high quality sound reproduction.

Length of Recording Sessions

It was anticipated that because Grade Ten social studies classes in the Edmonton Public Schools were scheduled in blocks of eighty minutes, that each observation would last approximately 45 minutes. This procedure was selected because of the following: (1) the first 15 to 20 minutes of the class period would be used by the students to read the content to be discussed, (2) teachers would need to perform normal classroom clerical tasks, such as settling students down, making assignments for the following day, and explaining the reading assignment,

and (3) maximized participation on the part of students can be obtained in 45 minutes. However, it was found that the average length of interaction time recorded for this study was 25 minutes.

Classroom Procedures

All teachers and students were supplied a four-page mimeograph containing a preselected discussion topic. The content of the discussion topic dealt with the illegal killing of moose in Alberta by American hunters. The mimeograph sheets contained six articles from the editorial section of the Edmonton Journal, December 5, 1971. One of the articles was written by a member of the Edmonton Journal editorial staff. Five articles are letters to the Editor. See Appendix D for a summary of the articles.

Each teacher was given a teacher's guide containing the procedures to be followed, and the content to be discussed during recording sessions. Teachers were instructed to use whatever method they normally use during class discussions. This procedure was emphasized in that the purpose of the study was to observe teachers interacting with students within normal conditions. See Appendix E for a summary of the teacher's guide used in this study.

Observer Training

Two observers were trained as a team so that the consistent ground rules could be established. This provided each observer with an understanding of his biases, and any category and coding difficulties that arose. Flanders' training tapes, which provide twelve hours of teacher-student verbal interaction were used for training the observers.

An additional seven hours of training was accomplished by using preliminary recording sessions obtained from each classroom used in this study. Also, because the training tapes contained few evaluative ventures both observers continued training in this area by analyzing the content of the Editorial section of the Edmonton Journal. Each observer completed fifteen hours of training using this procedure before actual observations were made. A total of 34 training hours was accomplished before actual coding was undertaken.

When the two observers began coding the recording sessions, it was found that it became difficult to keep the three dimensions of verbal behavior in perspective. Therefore, all recording sessions were transferred to typescripts. Both observers coded the typescripts until agreement was reached on the evaluative moves categories. See Appendix F for a sample typescript.

Statistical Procedures

The sample population used in this study consisted of 10 teachers and their students. Each teacher was observed teaching two separate classes. Therefore, the N for this study was 20. When Pearson's R or Multiple Correlation was used to test significance all intervals of coded behavior for 20 sessions for a particular category were correlated with all intervals for 20 sessions of another category. For example, when category 2--teacher initiates was correlated with category 13--identification moves, all coded teacher verbal intervals were correlated with all coded verbal intervals of teacher talk during identification moves.

The methods used for statistical analysis in this study were selected on the basis of the following: (1) the equality of three-second time intervals, and (2) tests were needed that were sensitive to correlations between a criterion and a predictor, and correlations between a criterion and the weighted sum of predictors. To determine relationships of a single criterion and a single predictor, a Pearson's product moment correlation coefficient was used. To test the joint relationship of a single Y variable to two X variables multiple correlation was used. Ferguson (1966) states: "No other system of weights will yield a higher correlation between the criterion and the weighted sum of predictors" (p. 393). Multiple correlation is denoted by R.

An F ratio was used to test whether an observed multiple correlation coefficient was significantly different from zero. In all F tests, the level of significance was set at 0.05. The T test was used to test the level of significance for regression coefficients. In all T tests, the level of significance was set at 0.05.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

Introduction

In Chapter IV results of this study are discussed and interpretations given. The discussion of results and interpretations could only have meaning if certain assumptions could be made: (1) would the tri-dimensional observation system designed for this study assess the verbal interaction displayed by teachers and students in classroom situations; (2) could a 0.85 interobserver reliability coefficient be obtained between two observers; and (3) could proper statistical treatment be found that would manipulate interval data, and provide tests of significance. These assumptions were discussed to the researcher's satisfaction in Chapter III.

Analysis and Interpretation of Research Questions

Analysis of Research Question One

The analysis of data in this study was guided by four research questions. The first research question was:

Are there significant relationships between the teacher-student talk dimension and the evaluative moves dimension?

Data relevant to this question are presented in Table I and Table II. In Table I correlation data and significant values are presented for the relationships that occurred when category 1--teacher response--and

TABLE I

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING VERBAL RELATIONSHIPS BETWEEN TEACHER TALK AND EVALUATIVE MOVES

Variables: Categories 1-2: Teacher Talk	Variables: Categories 13-18 Evaluative Moves	Correlation Coefficients	T Values
1	13	0.13	.581
1	14	-0.01	.940
1	15	-0.27	.247
1	16	-0.28	.228
1	17	0.10	.664
1	18	0.10	.647
2	13	0.18	.435
2	14	-0.33	.151
2	15	0.34	.131
2	16	0.66	.001 **
2	17	0.41	.072
2	18	-0.74	.001 **

**Significant at the 0.001 level

category 2--teacher initiates--were independently correlated with categories thirteen through eighteen in the evaluative moves dimension. Statistical tests revealed that significant results did not occur when category 1 was correlated with categories 13-18. Significant results did occur when category 2--teacher initiates--was correlated with category 16--criterial moves--and category 18--tangential moves. The correlation for category 2 and category 16 was 0.66; for category 2 and

TABLE II

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN STUDENT TALK AND EVALUATIVE MOVES

Variables 3-4: Student Talk	Variables 13-18: Evaluative Moves	Correlation Coefficients	T Values
3	13	-0.32	.158
3	14	0.22	.337
3	15	-0.31	.117
3	16	-0.23	.311
3	17	-0.26	.262
3	18	0.69	.001 **
4	13	0.19	.400
4	14	-0.12	.603
4	15	0.27	.240
4	16	0.41	.071
4	17	0.38	.098
4	18	-0.43	.053 *

*Significant at 0.05 level
**Significant at 0.01 level

18 the correlation was -0.74. Both correlations were at the 0.001 level of significance.

Table II displays the correlations and significant values computed for category 3--student responds--and category 4--student initiates when each was independently correlated with categories 13-18 in the evaluative moves dimension.

Significant results, at the 0.001 level, occurred between category 3--student responds--and category 18--tangential moves; the correlation was 0.69. When a correlation between category4--student initiates--and category 18--tangential moves--was undertaken, a negative correlation -0.43 with a significance of 0.05 was found. No other significant correlations occurred between the student talk dimension and evaluative moves dimension.

Interpretation of Results for Question One

The analysis of the teacher-student talk dimension and the evaluative moves dimension revealed two points. First, no significant relationships emerged when teacher responsive verbal behavior was correlated with evaluative moves. However, student responsive verbal behavior did correlate high with tangential moves (0.69). During evaluative moves, then, the evidence suggests that students responded to teacher initiation by touching on the value object, but not dealing with the value object at any great length. The evidence also shows that student responsive behavior did not include rating moves nor criterial moves. That no correlation was found between rating moves and student responsive behavior is not surprising due to the fact that during the twenty recording sessions, lasting an average of 25 minutes each, a value rating move was given only 15 times by students and six times by teachers.

Second, further analysis showed that teacher initiation and criterial moves had a high positive correlation (0.66). Evidently, teacher initiative verbal behavior was directed toward establishing

standards, rules, or means of verifying the value term once it was applied to the value object. Student initiative verbal behavior showed no significant positive relationships with any evaluative moves. The only significant relationship of student initiative was a negative relationship with tangential moves. This suggests that students were discouraged from initiating or when they did initiate, their verbal behavior was directed away from other moves in the evaluative moves dimension. It may be that the lack of teacher response to student initiative was the factor responsible for this particular outcome.

Analysis of Research Question Two

The second research question used in this study was:

Are there significant relationships between the teacher-student talk dimension and the teacher-student ideas dimension?

For purposes of analysis, data important to this question are presented in Table III and Table IV. In Table III correlation outcomes and T values are presented for the verbal relationships that occurred when category 1--teacher responds--and category 2--teacher initiates--were separately correlated with categories 6 through 11 in the source of ideas dimension.

Statistical tests showed that significant results were not found in any of the correlations between category 1 and categories 6 through 11. However, significant results occurred between category 2--teacher initiates--and category 7--teacher idea--and category 10--pupil idea. The correlation between category 2 and category 7 was 0.50, and was

TABLE III

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION TWO SHOWING RELATIONSHIPS BETWEEN TEACHER TALK AND SOURCE OF IDEAS

Variables: Categories 1-2 Teacher Talk	Variables: Categories 6-11 Source of Ideas	Correlation Coefficients	T Values
1	6	0.31	.172
1	7	-0.00	.977
1	8	-0.25	.270
1	9	-0.20	.375
1	10	0.19	.412
1	11	0.02	.927
2	6	0.04	.840
2	7	0.50	.023 *
2	8	0.57	.008
2	9	0.38	.095
2	10	-0.71	.001 **
2	11	0.04	.841

*Significant at the 0.02 level
**Significant at the 0.001 level

significant at the 0.02 level. There was a negative correlation -0.71 between category 2 and category 10--pupil idea.

The second component of question two dealt with the relationships between student responding and initiating and the source of ideas dimension. Table IV provides a display of the relationships that

TABLE IV

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION TWO SHOWING RELATIONSHIPS BETWEEN STUDENT TALK AND SOURCE OF IDEAS

Variables: Categories 3-4 Student Talk	Variables: Categories 6-11 Source of Ideas	Correlation Coefficients	T Values
3	6	-0.11	.633
3	7	-0.52	.018 **
3	8	-0.34	.138
3	9	-0.20	.382
3	10	-0.74	.001 *
3	11	-0.21	.373
4	6	0.35	.130
4	7	0.33	.154
4	8	0.40	.079
4	9	0.47	.036 ***
4	10	0.45	.042 ****
4	11	0.20	.394

*Significant at the 0.001 level
**Significant at the 0.01 level
***Significant at the 0.03 level
****Significant at the 0.04 level

occurred between category 3--student responds--and category 4--student initiates--when each was correlated with categories 6 through 11.

Significant results at the 0.01 level were obtained from a negative correlation -0.52 between category 3--student responds--and category 7--teacher idea. A positive correlation of 0.74, at the 0.001 level, occurred between category 3 and category 10--pupil idea. When student initiation, category 4, was correlated with categories 6-11, two significant values emerged. The first was a 0.03 level of significance between category 4 and category 9--student new idea; the correlation was 0.47. The second was a .04 significance between category 4--student initiation and category 10--pupil idea.

Interpretation of Results for Question Two

The above data showed four significant relationships. One of these relationships was between teacher initiation and teacher idea (.023). In the interpretation of Question One, it was found that the same type of high relationship occurred between teacher initiation and criterial moves. Also, the above data revealed that teachers did not respond using student ideas or student new ideas. This finding is consistent with what was found when teacher responsive behavior was correlated with the evaluative moves dimension in Question One. The second significant relationship relating to Question Two showed that students responded to teacher initiation using student ideas. However, in Question One it was pointed out that student responsive behavior was in the tangential moves category.

The third and fourth significant relationships showed that student initiation correlated with student ideas and student new ideas. It was pointed out in the interpretation of Question One that student

initiation and tangential moves correlated negatively. Why this should occur is unknown. However, one explanation could be that the nature of teacher initiative and/or responsive verbal behavior caused student initiative verbal behavior to be dispersed throughout the evaluative moves dimension to such a degree that positive significant relationships between student initiation and evaluative moves could not be detected by statistical analysis.

Analysis of Research Question Three

The third question used to guide this study was:

Are there significant relationships between the teacher-student ideas dimension and the evaluative moves dimension?

Correlations and T values for question three are presented in Table V and Table VI. Table V contains the relationships that occurred when category 6--teacher direction, category 7--teacher idea, and category 8--teacher new idea--were independently correlated with categories 13 through 18 in the evaluative moves dimension.

Statistical tests revealed that significant results were reached when category 6--teacher direction--was correlated with category 13--identification moves. The correlation between categories 6 and 13 was 0.60; the significance level was 0.005. Significant results, at the 0.01 level, occurred when category 7--teacher idea--was correlated with category 18--tangential moves; the correlation between categories 7 and 18 was -0.54. A correlation of -0.69 was found when category 8--teacher new idea--was correlated with category 17--relational moves. This correlation was significant at the 0.001 level.

TABLE V

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN TEACHER IDEAS AND EVALUATIVE MOVES

Variables: Categories 6-8 Teacher Ideas	Variables: Categories 13-18 Evaluative Moves	Correlation Coefficients	T Values
6	13	0.60	.005 ***
6	14	0.03	.894
6	15	0.18	.435
6	16	-0.02	.908
6	17	-0.11	.644
6	18	0.00	.988
7	13	0.08	.711
7	14	0.20	.382
7	15	0.09	.694
7	16	0.37	.106
7	17	-0.17	.470
7	18	-0.54	.012 **
8	13	0.03	.899
8	14	-0.55	.012 **
8	15	0.28	.217
8	16	0.36	.116
8	17	0.69	.001 *
8	18	-0.33	.152

*Significant at the 0.001 level
**Significant at the 0.01 level
***Significant at the 0.005 level

TABLE VI

VARIABLE PAIRED CORRELATION COEFFICIENTS FOR DIMENSION ONE AND DIMENSION THREE SHOWING RELATIONSHIPS BETWEEN STUDENT IDEAS AND EVALUATIVE MOVES

Variables: Categories 9-11 Student Ideas	Variables: Categories 13-18 Evaluative Moves	Correlation Coefficients	T Values
9	13	0.16	.490
9	14	-0.36	.119
9	15	0.35	.120
9	16	0.10	.655
9	17	0.62	.003 *
9	18	-0.14	.539
10	13	-0.24	.298
10	14	0.39	.088
10	15	-0.48	.032 ***
10	16	-0.17	.472
10	17	-0.54	.012 **
10	18	0.55	.012 **
11	13	0.28	.228
11	14	-0.52	.017 **
11	15	0.03	.872
11	16	-0.33	.145
11	17	-0.40	.080
11	18	-0.15	.521

*Significant at the 0.003 level
**Significant at the 0.012 level
***Significant at the 0.03 level

Table VI shows the correlation coefficients that occurred when category 9--pupil new idea, category 10--pupil idea, and category 11--student direction in the source of ideas dimension were correlated with categories 13 through 18 the inevaluative moves dimension.

A positive correlation of 0.62 with a significance level of 0.003 occurred when category 9--student new idea--was correlated with category 17--relational moves. When category 10--pupil idea--was correlated with category 15--rating moves, a negative correlation of -0.48 was found; the level of significance was 0.03. Category 10--pupil idea--also correlated negatively (-0.54) with category 17--relational moves. The level of significance for categories 10 and 17 was 0.012. When category 11--student direction--was correlated with category 14--descriptive moves, a negative correlation (-0.52) and a significance level of 0.01 was found.

Interpretation of Data for Question Three

Question Three asked if relationships occurred between the teacher-student ideas dimension and the evaluative moves dimension. From the date elaborated in the text and the tables above, it can be seen that four positive correlations occurred. First, when teachers were giving directions they tended to identify the value object to be discussed. In this study students did not identify the value object so that it could be significantly tested. Second, teachers tended to justify rating moves using their own ideas. This is supported by a high correlation (0.69) between teacher new idea and relational moves. This finding is consistent with the findings in Question One where it was pointed out that teacher initiative behavior correlated high (0.66) with criterial moves.

Both these facts point out the dominate nature of teacher ideas and teacher initiative during this study.

A third positive correlation of 0.62 appeared when pupil new idea was related to relational moves. When pupils were expressing their own ideas during evaluative ventures they tended to provide supplementary information about the value object. The fourth positive correlation occurred between pupil ideas and tangential moves (0.55). Again, in Question One it was stated that student response and tangential moves had a high positive correlation (0.66). Also, as was found in Question One, Question Three revealed that no positive correlations emerged between any category in the pupil ideas dimension and rating moves category or the criterial moves category.

Analysis of Research Question Four

The fourth research question used in this study was:

Are there significant relationships between the teacher-student talk dimension, the teacher-student ideas dimension, and the evaluative moves dimension?

The analysis of relationships important to question four required the data to be reported and displayed differently than the data in questions 1 through 3. Data were reported and displayed in terms of multiple correlations and significant F values. Then, to show the effects of independent variables, regression coefficients were reported and T values given.

In Table VII significant multiple correlations for the teacher responds category, the source of ideas dimension, and the evaluative

TABLE VII

MULTIPLE CORRELATION TABLE FOR TEACHER RESPONDS, SOURCE OF IDEAS, AND EVALUATIVE MOVES

Variable: Evaluate Moves	Variable 1: Teacher Responds	Variable 2: Source of Ideas	Multiple Correlation	F Value
14	1	8	0.57	4.19 *
17	1	8	0.75	10.94 **
17	1	9	0.66	6.77 **
18	1	10	0.58	4.51 *
18	1	7	0.55	3.85 *
18	1	10	0.55	3.72 *

*Significant at the 0.05 level
**Significant at the 0.01 level

moves dimension are presented. When category 1--teacher responds--and category 8--teacher new idea--were correlated with categories 14 and 17 --descriptive moves and relational moves--correlations occurred at 0.57 and 0.75. These correlations had F values of 4.19 and 10.94. An F value of 4.19 was significant at the 0.05 level. The 10.94 F value was significant at the 0.01 level. When category 1--teacher responds and category 9--student new idea--were correlated with category 17--relational moves, a 0.66 multiple correlation was found. The F value was 6.77 with significance at the 0.01 level.

Category 1--teacher responds and category 10--pupil idea--were correlated with category 17, also. This correlation was 0.58 with a 4.51 F value and a significance at the 0.05 level. A 0.05 level of

significance was found when category 1 and category 7 were correlated with category 18--tangential moves; the F value was 3.85. Finally, when category 1--teacher responds and category 10--pupil idea--were correlated with tangential moves, an F value of 3.72 and a significance of 0.05 was calculated.

In order to provide some explanation of which of the independent variables seemed to be contributing to the correlations displayed in Table VII, regression coefficients for variable one--category 1 and variable two--categories 6-11 are presented in Table VIII on the following page. Significance values for these coefficients were computed by using the T test.

Table VIII shows that negative regression coefficients occurred between category 1 and category 8; category 1 and category 10; and category 1 and category 7. A positive regression coefficient appeared between category 1 and category 8 when they were correlated with category 17--relational moves. Positive regression coefficients occurred when category 1 and category 9, and when category 1 and category 10 were compared. For all situations, significant T values were found, in variable two--source of ideas, categories 8-10. Categories 8-10 seemed to have the greatest predictive impact on the evaluative moves categories.

Interpretation of Data for Teacher Responds, Source of Ideas, and Evaluative Moves

As was seen in Table VIII, seven significant F values were obtained. Of the seven significant F values, four were positive in nature; these positive correlations occurred in the source of ideas dimension--

TABLE VIII

REGRESSION COEFFICIENTS FOR VARIABLE ONE-TEACHER RESPONDS (CATEGORY 1) AND VARIABLE TWO-SOURCE OF IDEAS (CATEGORIES 7, 8, 9, and 10)

Dependent Variables Evaluative Moves 14, 17, & 18	Regression Coefficients for Variable One: Teacher Responds, Category 1				Regression Coefficients for Variable Two: Source of Ideas, Categories 7, 8, 9 & 10			
	Category	Correlation	Coefficient	T Values	Category	Correlation	Coefficient	T Values
14	1	-0.01	-0.66	-0.83	8	-0.55	-0.47	-2.89 **
17	1	0.10	1.10	1.82	8	0.69	0.58	4.63 **
17	1	0.10	0.89	1.32	9	0.62	69	3.63 **
18	1	0.10	0.79	1.09	10	-0.54	-0.34	-2.95 **
18	1	0.10	0.24	0.52	7	-0.54	-0.02	-2.72 **
18	1	0.10	0.004	0.01	10	0.55	0.20	2.67 **

**Significant at the 0.01 level

variable two. The teacher response category--category 1--showed no significant T values.

In the interpretation of Questions One and Two it was pointed out that teacher responsive behavior could not be significantly correlated with evaluative moves or student ideas. The T values in Table VIII for categories 9 and 10 (pupil new idea and pupil idea) confirm this finding. And, it appears that these two variables had the greatest impact on determining the significant F values displayed in Table VII. In other words, teacher responsive verbal behavior did correlate significantly with student ideas in the relational or the tangential moves categories. The other significant T value in Table VIII was category 8--teacher new idea. This points to the fact that teachers did not respond to student ideas by using teacher new ideas, nor did teachers respond in any significant manner to pupil ideas.

Table IX shows the significant relationships that occurred when category 2--teacher initiates--and category 7 through 10--source of ideas dimension--were correlated with evaluative moves categories 13, 14, 16, 17, and 18. A correlation of 0.64 was found when category 2--teacher initiates--and category 7--teacher idea--were related to category 13--identification moves in the evaluative moves dimension. The F value for this correlation was 5.91. When category 2--teacher initiates--and category 7--teacher idea--were correlated with category 14--descriptive moves, a 0.54 correlation was found; the level of significance was 0.05. This also happened when categories 2 and 8 were correlated with category 14. The correlation was 0.55 with a significant level of 0.01. Significant relationships were found when category 2 and categories 7, 8, 9, and

TABLE IX

MULTIPLE CORRELATION TABLE FOR TEACHER INITIATES, SOURCE OF IDEAS, AND EVALUATIVE MOVES

Variable: Evaluative Moves Categories 14-18	Variable One: Teacher Initiates Category 2	Variable Two: Source of Ideas Categories 7-10	Multiple Correlations	F Values
13	2	7	0.64	5.91 *
14	2	7	0.54	3.65 *
14	2	8	0.55	3.69 *
16	2	7	0.66	6.78 **
16	2	8	0.66	6.75 **
16	2	9	0.68	7.48 **
16	2	10	0.79	14.56 **
17	2	7	0.60	4.84 *
17	2	8	0.69	7.76 **
17	2	9	0.64	6.19 **
17	2	10	0.54	3.67 *
18	2	7	0.77	12.72 **
18	2	8	0.75	11.55 **
18	2	9	0.76	11.95 **
18	2	10	0.74	10.89 **

*Significant at the 0.05 level
**Significant at the 0.01 level

10 were correlated with category 16--critical moves. The correlations for 2, 7, and 16 were 0.66; for 2, 8, and 16 the correlation was 0.79. All significant F values for these correlations were at the 0.01 level.

Significant F values were found when category 2 and categories 7, 8, 9, and 10 were correlated with category 17--relational moves. The correlations for 2, 7, and 17 were 0.60; for 2, 10, and 17 they were 0.54. Both of these correlations were at the 0.06 level of significance. When categories 2, 8, and 17 were correlated at 0.69 relationship occurred. A correlation of 0.64 occurred between categories 2, 9, and 17. Both of these correlations were at the 0.01 level of significance. When category 2 and categories 7, 8, 9, and 10 were correlated with category 18--tangential moves--a significant F value of 0.01 was found for each multiple correlation.

Table X, on the following page, shows the significant regression coefficients for the multiple correlations contained in Table IX above. These regression coefficients are for independent variables (categories) 2, 7, 8, 9, and 10. Categories 2 and 7 both had significant T values at the 0.05 level. The coefficient for category 2 was -0.50; for category 7 it was 0.45. When category 2 and category 8 were compared it was found that category 8 with a -0.42 coefficient had a significant T value of 0.05.

When category 2 and categories 7, 8, 9, and 10 were compared to determine where significant influences occurred in relation to variable (category) 16--criterial moves, it was found in each case that coefficient values at the 0.01 level of significance occurred in category 2--teacher initiates. Table X also shows the pattern of relationships in terms of regression coefficients for category 2, and categories 7, 8, 9, and 10 when comparisons were made with category 17--relational moves. In the case of categories 2 and 7, category 2 had a positive

TABLE X

REGRESSION COEFFICIENTS FOR VARIABLE ONE-TEACHER INITIATES (CATEGORY 2) AND VARIABLE TWO-SOURCE OF IDEAS (CATEGORIES 7-10)

Variables Evaluative Moves 14, 16,17 & 18	Regression Coefficients for Variable One: Teacher Initiates, Category 2				Regression Coefficients for Variable Two: Source of Ideas, Categories 7-10			
	Category	Correlation	Coefficient	T Values	Category	Correlation	Coefficient	T Values
13	2	0.19	0.03	1.15	7	0.60	0.54	3.29 **
14	2	0.33	0.50	2.50 *	7	0.20	0.45	2.14 *
14	2	-0.33	-0.02	-0.09	8	-0.55	-0.42	-2.16 *
16	2	0.66	0.61	3.05 **	7	0.37	0.04	0.22
16	2	0.66	0.65	3.08 **	8	0.36	-0.02	-0.14
16	2	0.66	0.70	3.82 **	9	0.10	-0.21	-0.90
16	2	0.66	1.06	5.27 **	10	-0.17	0.42	2.95 **
17	2	0.41	1.54	2.98 **	7	-0.17	-0.43	-2.72 **
17	2	0.41	0.01	0.08	8	0.69	0.51	3.16 **
17	2	0.41	0.16	1.01	9	0.62	0.56	2.72 **
17	2	0.41	0.03	0.13	10	-0.54	-0.30	-1.79
18	2	-0.74	-0.32	-0.16	7	-0.54	-0.12	-1.27
18	2	-0.74	-0.43	-4.32 **	8	-0.33	0.07	0.77
18	2	-0.74	-0.42	-4.79 **	9	-0.14	0.10	0.97
18	2	-0.74	-0.37	-3.15 **	10	-0.55	0.01	0.15

*Significant at the 0.05 level
**Significant at the 0.01 level

regression coefficient of 0.54 and a T value of 0.01 significance, and category 7 had a negative regression coefficient of 0.43 and a T value of 2.27 which was significant at the 0.05 level.

A comparison of regression coefficients for categories 2 and 8 showed a positive regression coefficient of 0.51 for category 8. The T value was 3.16 which was significant at the 0.01 level. When category 2 and category 9--pupil new idea--were compared, it was found that category 9 had a 0.62 regression coefficient and was significant at the 0.01 level. Neither category 2 nor category 10--student idea--had significant T values. Also, when the regression coefficients for category 2 was matched with the regression coefficients for categories 7, 8, 9, and 10 during tangential moves, it was found that category 2 had significant negative T values at the 0.01 level in each case.

Interpretation of Data for Teacher Initiates, Source of Ideas, and Evaluative Moves

Table X displays the significant regression coefficients for teacher initiation--category 2, the source of ideas dimension, and five of the seven evaluative moves categories. The first significant positive T values are those for variables 2 and 7. This evidence points out that during identification and descriptive moves teachers initiated using their own ideas. These findings were not obtained in the analysis of data for Question One. It was further pointed out in Question One that students did not reveal initiative verbal behavior in the identification and descriptive moves categories.

The second positive T value was found between category 2--teacher

initiates--and category 16--criterial moves. This same finding was discussed in relation to Question One where a significant T value of .001 was obtained. Category 7--teacher idea--was positive but not significant. The next significant T value was for teacher initiation, also, but category 8--teacher new idea--had a negative T value. This finding indicates that teacher initiative behavior was dominate during criterial moves, but that behavior did not include teacher new ideas.

It was also found, as was pointed out in Table X, that when teachers initiated during relational moves little use was made of teacher ideas. However, during relational moves teachers tended to use teacher new ideas as demonstrated by a 3.16 T value. The last three significant T values related to relational moves found in Table X are negative. A similar finding was found in the analysis of Question One where the correlation between teacher initiation and tangential moves was negative.

One general finding dealing with this segment of Question Three was that teachers demonstrated strong verbal initiative behavior using their own ideas during identification, descriptive, criterial, and relational moves. A second general finding, which remains consistent with the results discussed in Questions One, Two, and Three, is that by using a more powerful correlation statistical treatment, significant results for rating moves did not surface.

Table XI displays the significant multiple correlations that occurred when category 3--student responds, and categories 7, 8, 9, and 10, in the source of ideas dimension, were correlated with categories 14, 17, and 18 in the evaluative moves dimension.

TABLE XI

MULTIPLE CORRELATION TABLE FOR STUDENT RESPONDS, SOURCE OF IDEAS, AND EVALUATIVE MOVES

Variable: Evaluative Moves Categories 14-18	Variable One: Student Responds Category 3	Variable Two: Source of Ideas Categories 7-10	Multiple Correlations	F Values
14	3	8	0.55	3.71 *
17	3	8	0.69	7.78 **
17	3	9	0.63	5.80 *
17	3	10	0.59	4.54 *
18	3	7	0.72	9.60 **
18	3	8	0.70	8.26 **
18	3	9	0.69	7.95 **
18	3	10	0.69	8.04 **

*Significant at the 0.05 level
**Significant at the 0.01 level

When categories 3--student responds and 8--teacher new idea--were correlated with category 14--descriptive moves--a significant value of 3.71 was found; the correlation was 0.55. A significant value of 7.78, at the 0.01 level, was found when category 3 and category 8 were correlated with category 17--relational moves. Significant F values at the 0.05 level were also found when category 3 and categories 9 and 10 were correlated with category 17. Table XI shows these relationships. When category 3 and categories 7, 8, 9, and 10 were correlated with 18--tangential moves, significant F values at the 0.01 level were found.

To show the contributions made by predictor variables on the criterion variables, Table XII is presented. During descriptive moves, when a regression coefficient was figured for category 3--student responds and category 8--teacher new idea, it was found that category 8 had the greatest predictive value. The correlation was -0.55 with a significant T value of 0.05. An analysis of category 3, and categories 8, 9--pupil new idea--and 10--pupil idea during relational moves--showed that categories 8 and 9 had correlations of 0.69 and 0.62; each had a significant T value at the 0.01 level. Category 10--pupil idea--had a -0.54 correlation and was significant at the 0.01 level. During tangential moves, category 3--student responds--had the greatest predictive impact. Categories 7, 8, and 9 did not have significant predictive value. When category 3 and category 10 were analyzed it was found that both had predictive power, but neither was significant in its influence on the criterion variable--category 18--tangential moves.

Interpretation of Data for Student Responds, Source of Ideas, and Evaluative Moves

The analysis of data in Table XII pointed out three important findings. First, students did not use teacher new ideas, or pupil new ideas, when responding to teacher initiation during descriptive and relational moves. Second, a negative T value for category 10--pupil ideas and their relationship to category 3--student responds during relational moves--category 17--was found. It is noticeable that category 3 was also a negative correlation, but was not significant. It was pointed out in the interpretation of Question Three that the relationship

TABLE XII

REGRESSION COEFFICIENTS FOR VARIABLE ONE-STUDENT RESPONDS (CATEGORY 3) AND VARIABLE TWO-SOURCE OF IDEAS (CATEGORIES 7, 8, 9 & 10)

Variables: Evaluative Moves 14, 17 & 18	Regression Coefficients for Variable One: Student Responds, Category 3				Regression Coefficients for Variable Two: Source of Ideas, Categories 7, 8, 9 & 10			
	Category	Correlation	Coefficient	T Values	Category	Correlation	Coefficient	T Values
14	3	0.22	0.03	0.19	8	-0.55	-0.42	-2.48 *
17	3	-0.26	-0.02	-0.15	8	0.69	0.51	3.64 **
17	3	-0.26	-0.12	-0.73	9	0.62	0.61	3.10 **
17	3	-0.26	0.29	1.11	10	-0.54	-0.45	-2.69 **
18	3	0.69	0.32	2.88 **	7	-0.54	-0.13	-1.30
18	3	0.69	0.38	3.58 **	8	-0.33	-0.05	-0.56
18	3	0.69	0.40	3.89 **	9	-0.14	-0.001	-0.01
18	3	0.69	0.36	2.44	10	0.55	0.02	0.29

*Significant at the 0.05 level
**Significant at the 0.01 level

between pupil new idea--category 9--and relational moves was significantly positive, and that the relationship between pupil idea--category 10--and tangential moves--category 18--had a significant positive correlation. Also, if we look at teacher responsive behavior and relational moves--as was displayed in Table VI, Question Three, it can be seen that teacher new idea positively correlated with relational moves.

Three, during tangential moves student responsive verbal behavior was found to be positively significant at the .01 level. This finding was also mentioned in the interpretation of Question One. Fourth, there were no significant positive relationships found between category 3 and any of the pupil ideas categories. What this seems to imply is that students showed strong responsive behavior, but it was dispersed throughout the evaluative moves dimension to such an extent that statistical treatment could not detect significant results. Furthermore, student response could not be correlated with rating moves. This finding is consistent with the results elaborated in Question One.

Table XIII shows the multiple correlations for the final portion of Question Four. Data related to student initiates, source of ideas, and evaluative moves are presented. Table XIII reveals that when category 1--student initiates, and category 8--teacher new idea--were correlated with category 14--descriptive moves, a significant multiple correlation of 0.56 occurred. During relational moves--category 17--other significant relationships were found. For example, when categories 4 and 8 were correlated with category 17, a 0.01 significant F value of

TABLE XIII

MULTIPLE CORRELATION TABLE FOR STUDENT INITIATES, SOURCE OF IDEAS, AND EVALUATIVE MOVES

Variable: Evaluative Moves Categories 14-18	Variable One: Student Initiates Category 4	Variable Two: Source of Ideas Categories 7-10	Multiple Correlation	F Values
14	4	8	0.56	3.88 *
17	4	8	0.69	8.16 **
17	4	9	0.62	5.58 *
17	4	10	0.56	4.04 *
18	4	7	0.61	5.10 *
18	4	10	0.59	4.55 *

*Significant at the 0.05 level
**Significant at the 0.01 level

8.16 was found. Significant correlations were found when category 4, category 9--student new idea, and category 10--student idea--were correlated with category 17. Each correlation was significant at the 0.05 level. When category 4, category 7--teacher idea, and category 10--pupil idea--were correlated with category 18--tangential moves, significant multiple correlations occurred.

Regression coefficients for the final portion of Question Four will be found in Table XIV on the following page. During descriptive moves, relational moves, and tangential moves, category 4--student initiates--did not receive significant T values. Significant T values

TABLE XIV

REGRESSION COEFFICIENTS FOR VARIABLE ONE-STUDENT INITIATES (CATEGORY 4) AND VARIABLE TWO-SOURCE OF IDEAS (CATEGORIES 7, 8, 9, & 10)

Variables Evaluative Moves 14, 17, & 18	Regression Coefficients for Variable One: Student Initiates, Category 4				Regression Coefficients for Variable Two: Source of Ideas, Categories 7, 8, 9 & 10			
	Category	Correlation	Coefficient	T Values	Category	Correlation	Coefficient	T Values
14	4	0.12	0.22	0.52	8	-0.55	-0.47	-2.72 **
17	4	-0.38	0.22	0.65	8	0.69	0.48	3.39 **
17	4	0.38	0.20	0.52	9	0.62	0.58	2.66 **
17	4	0.38	0.29	0.72	10	-0.54	-0.27	-2.11 *
18	4	0.43	-0.33	-1.42	7	-0.54	-0.24	-2.22 *
18	4	-0.43	-0.27	-1.06	10	0.55	0.16	2.01

*Significant at the 0.05 level
**Significant at the 0.01 level

for categories 8 and 9 were found at the 0.01 level. For categories 10 and 7, significant T values at the 0.05 level occurred.

Interpretation of Data for Pupil Initiates, Pupil Ideas, and Evaluative Moves

Table XIII reveals an important relationship. That relationship is between category 4--student initiates, pupil new idea, and relational moves. Here it was found that category 9--pupil new idea--obtained a .01 level of significance. Category 4 was not significant, but was directional. Apparently some student initiative behavior was directed toward relational moves and not toward rating moves or criterial moves during evaluative ventures. This finding is consistent with what was found for Questions One, Two, and Three.

Summary

In this chapter the analysis and the interpretation of data relevant to this study was undertaken. The analysis of the first three questions was accomplished on the basis of Pearson's R. After each analysis was given, interpretation was provided. The analysis of data contained in Question Four required a more powerful statistical approach. Multiple correlation supplied this approach. Again, after the analysis of data was displayed, interpretations of results were supplied.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The limited scope of this study indicated that the following conclusions could be stated:

Methodological Requirements Met

To analyze the cognitive and affective verbal communication that occurred in classrooms used in this study, certain methodological factors had to be met:

1) The selection or construction of an observation system. For this study the observation system was constructed from two existing systems: a) Meux's Evaluative Operations Analysis System, and b) Flander's Modified Interaction Analysis System. The result of merging the two systems was TOCS--*a* Tri-dimensional Observation Category System. The construction of TOCS was undertaken within the theoretical framework advanced by Kerlinger (1967, pp. 506-514) namely, that TOCS should satisfy the criteria listed in Chapter III of this study. These criteria were met.

2) The data collection procedures had to be reasonable. This necessitated uniformity in observation procedures, recording sessions, classroom procedures, observer training, and statistical application. Evidently, these methodological considerations were carried out in a systematic fashion because interobserver reliability met the 0.85 level

proposed by other researchers using observation category systems. Furthermore, a number of significant relationships were found when statistical treatments were applied to the data.

Applicability to Field Testing and Teaching

One of the important elements of an observation system is its applicability to further research and its potential for use in classrooms by teachers. Flander's (1970) provides a note of caution concerning applicability of category systems:

> . . . when a new category system is developed, attention is first given to investigating criteria of reliability and validity in a kind of eagerness to become academically respectable. As high as the standards of scientific objectivity may be, they are not as difficult to achieve as the standards of efficiency which field workers impose in judging the utility of a procedure (p. 160).

TOCS meets the standards of reliability and validity as proposed in Chapter II. Researchers and field workers, if their problems are well defined, could use TOCS as a tool for analyzing teaching. However, the utilization of TOCS, in its present form, by teachers is highly unlikely. The system of coding is too complex, and the length of training time needed to become proficient in the use of the system is too long. In short, TOCS does not have the functional viability for teacher use under normal classroom instructional situations.

Significant Findings

The present study was undertaken with no particular intent of identifying specific verbal behavior patterns through hypotheses testing. However, it was found during this study that initiative and responsive

verbal behavior on the part of teachers and pupils did show significant relationships. These relationships were discussed at length in Chapter IV. The significant relationships tend to support Flanders (1970) view of the authority role played by teachers in our culture:

> In our culture, classroom behavior practically invites the interpretation that all pupils . . . possess a built-in dependence on the authority of the instructor (p. 288).

This cultural interpretation implies that interaction of the classroom teacher with his or her pupils can generally be described with the concept of leadership. The good leader fills a major role--initiating structure (Smith, 1973, p. 23). In terms of role expectations the teacher gives directions, sets standards, organizes activities, and is involved in all phases of group activities.

The findings of this study did not seem to show deviation from the initiating structure concept. Student initiative behavior during evaluative ventures showed minor significant relationships during evaluative moves. Two positive relationships occurred. One was between pupil new idea and relational moves. The second was between pupil idea and tangential moves. A negative relationship occurred between pupil initiation, pupil idea, and rating moves. A negative relationship also occurred between pupil idea and criterial moves. Significant relationships concerning student responsive verbal behavior and pupils using their own ideas occurred mainly during tangential moves.

Teacher responsive verbal behavior showed no significant positive relationships with pupil ideas or pupil new ideas. In terms of

initiative behavior, teachers tended to initiate using their own ideas. Teacher initiative behavior was shown to correlate significantly with teacher idea, descriptive moves and relational moves; during relational moves teachers tended to use teacher new ideas. A high positive correlation was found between identification moves and teacher direction. Also, teacher initiative verbal behavior correlated high (0.01 level of significance) with teacher ideas and criterial moves. Teacher-student initiative and responsive verbal behavior did not correlate significantly with rating moves.

Recommendations

This thesis was a natural history study designed to investigate the relationships between student-teacher cognitive and affective verbal interaction during evaluative ventures. The study was conducted from a hypothesis-free viewpoint. Also, the teachers used in this study did not represent a random sample. Therefore, if a researcher wishes to use TOCS in a research situation, within the framework of the recommendations listed below, it is suggested that random sampling procedures and the null-hypothesis be utilized. Recommendations for further research are:

1. Design research projects incorporating larger samples of teachers extending over longer periods of time using experimental and control groups.

2. Develop more complex studies to examine the interactive relationships between teacher-student cognitive and affective verbal interaction, student and/or teacher personality types, source of ideas,

and evaluative moves. It was found in this study, for example, that criterial moves were not a significant product of student initiation or response, but was part of teacher verbal behavior during teacher initiation. It could be as Kemp (1961) and Rokeach (1960) have found that emotional factors influence thinking processes. These authors make the assumption that a dynamic relationship exists between personality and the way a person reasons. For the most part, they have looked specifically at open- and closed-mindedness, rigidity, and dogmatism as they affect the way a person can make judgments. A researcher might want to investigate these types of personality factors as they relate to criterial moves, as well as other moves, and various types of teacher initiative-response patterns.

3. Another research possibility might be that of assuming that Meux's evaluative moves are hierarchical in nature, an assumption Meux did not make. If a researcher wished to make a hierarchical assumption, he would be implying that certain evaluative moves (identification and descriptive) will occur earlier in evaluative ventures than others (criterial and relational). Though Meux did not make this assumption, Flanders (1970, pp. 184-85), at least theoretically, indicates there are various reciprocal relationships between student verbal behavior, teacher verbal behavior, and patterns of logical thinking. Flanders assumes that certain sequential patterns of verbal behavior manifest themselves, depending on the nature of teacher initiation and response. Types of teacher initiation and response, then, could be experimentally matched with various instructional settings to determine if the level of student thinking is significantly affected by different teacher initiation

and response patterns.

4. One of the conclusions listed above was the translation of TOCS, in its present state, from a research instrument to a tool to be incorporated into daily lesson plans is unlikely to occur. Yet, Flanders notes (1970) "Most evaluations of programs in which interaction analysis is used as a learning experience show that the trainees will increase their responsiveness to pupil ideas and initiative"(p. 374). Also, as was pointed out in Chapter I of this study, educational thinkers are becoming increasingly concerned with normative classroom instruction.

Assuming both the above statements are worth investigating, research studies could be constructed in which TOCS would be used as a vehicle for training pre-service or experienced teachers in interaction analysis. Any researcher attempting this type of research would be faced with the decision of whether or not to use TOCS in its complete form. For example, it might be economical to select specific categories in dimension three, i.e., identification, descriptive, rating, and criterial moves. This would keep the trainees from becoming overloaded with the complexities of multiple coding. The researcher could then set up experimental and control groups to determine if subjects do respond to interaction analysis training, and if there is change in trainee normative classroom verbal behavior.

BIBLIOGRAPHY

Amidon, Edmund J. and John B. Hough. Interaction Analysis: Theory, Research and Application. Don Mills, Ontario: Addison-Wesley Publishing Co:, 1967.

Anderson, H. H. "The Measurement of Domination and of Socially Integrative Behavior in Teacher's Contact with Children." Child Development, Vol. 10, No. 2: 73-89, 1939.

Aoki, Ted T. "Controlled Change: A Crucial Curriculum Component in Social Education." A paper presented at the Annual Conference of the National Council for the Social Studies, Denver, Colorado, November 26, 1971.

_____. "A Curriculum and Instructional Design." An address presented at the Project Canada West Workshop, June 19, 1970, held at Providence Center, Edmonton, Alberta.

Bales, Robert F. and Fred L. Strodtbeck. "Phases in Group Problem-Solving." In Amidon, Edmund and John Hough (Eds.) Interaction Analysis: Theory, Research and Application. Don Mills, Ontario: Addison-Wesley, 1967.

Bellack, Arno A. (Ed.) Theory and Research in Teaching. New York: Bureau of Publications, Teachers College, Columbia University, 1963.

Bellack, Arno A. et al. The Language of the Classroom. New York: Teachers College Press, 1966.

Brown, Ralph A. and Marian R. Brown. "Biography and the Development of Values." Social Education, Vol. 36, No. 1: 43-48, January, 1972.

Broudy, Harry S., O. Othanel Smith, and Joe R. Burnett. Democracy and Excellence in American Secondary Education. Scarborough, Ontario: W. J. Gage Limited, 1964.

Bruner, Jerome S. "The Process of Education Revisited." Phi Delta Kappan, Vol. 53, No. 1: 18-21, September, 1971.

Cardozo, Benjamin. "The Nature of the Judicial Process." In Massialas, Byron G. and Benjamin C. Cox. Inquiry in Social Studies. New York: McGraw-Hill Book Co., 1966.

Casper, Gary G. "A Value Model: A Programmed Text." In Metcalf, Lawrence E. (Ed.) Values Education: Rationale, Strategies and

Procedures. 41st Yearbook, National Council for the Social Studies, 1971.

Chadwick, James. "Procedures for Value Analysis." In Metcalf, Lawrence E. (Ed.) Values Education: Rationale, Strategies, and Procedures. 41st Yearbook, National Council for the Social Studies, 1971.

Columbia Associates in Philosophy. In Massialas, Byron G. and Benjamin C. Cox. Inquiry in Social Studies. New York: McGraw-Hill Book Co., 1966.

Coombs, Jerrold R. In Metcalf, Lawrence C. (Ed.) Values Education, Rationale Strategies and Procedures. National Council for the Social Studies, 41st Yearbook, 1971.

Eisner, Elliot W. "Instruction, Teaching, and Learning: An Attempt at Differentiation." Elementary School Journal, Vol. 65: 115-119, December, 1964.

Ferguson, George A. Statistical Analysis in Psychology and Education. Toronto: McGraw-Hill Book Co., 1959.

Flanders, Ned A. Teacher Influence, Pupil Attitudes, and Achievement. U.S. Department of Health, Education, and Welfare, Office of Education, Project No. OE-25040. University of Minnesota, 1965.

_____. "Teacher Effectiveness." In Ebel, Robert L. (Ed.) Encyclopedia of Educational Research. Ontario: The Macmillan Co., 1969.

_____. Analyzing Teacher Behavior. Don Mills, Ontario: Addison-Wesley, 1970.

Gage, N. L. "Paradigms for Research on Teaching." In Hyman, Ronald T. Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Gagnon, A. Lawrence. "An Analysis of An Experimental Methodology for Teaching Thinking and Clarifying Values." Unpublished Doctoral Dissertation, Wayne State University, 1965.

Gallagher, James J. "Teacher Variation in Concept Presentation in BSCS Curriculum Program." BSCS Newsletter, 30: 8-18, 1967.

Gallagher, James J. and Mary J. Aschner. "A Preliminary Report on Analyses of Classroom Interaction." In Hyman, Ronald T. Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Goodlad, John I. "Curriculum: State of the Field." Review of Educational Research, Vol. 39, No. 3, pp. 367-375, 1969.

Hughes, Marie M. "What Is Teaching? One Viewpoint." In Hyman, Ronald T. Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Hyman, Ronald T. Contemporary Thought on Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

_____. Teaching: Vantage Points for Study. Toronto: J. B. Lippincott Co., 1968.

Jackson, Philip W. "The Way Teaching Is." In Hyman, Ronald T. Contemporary Thought on Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

Johnson, Mauritz, Jr. "Definitions and Models in Curriculum Theory." Educational Theory. Vol. 17, No. 2, 127-140, April, 1967.

Kemp, Clarence G. "Effect of Dogmatism on Critical Thinking." School Science and Mathematics. Vol. 60: 314-319, 1960.

Kerlinger, Fred N. Foundations of Behavioral Research. Toronto: Holt, Rinehart and Winston, Inc., 1967.

Lang, Melvin. "An Investigation of the Relationship of Value Clarification to Underachievement and Certain Other Behavioral Characteristics of Selected College Students." Unpublished Doctoral Dissertation, New York University, 1962.

Lippitt, R. and R. K. White. "The Social Climate of Children's Groups." In R. G. Barker, J. S. Lounia and H. F. Wright (Eds.). Child Behavior and Development. New York: 1943, 458-508.

MacDonald, James B. "A Systems Approach for Defining Teaching." Contemporary Thought on Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

Medley, Donald and Harold E. Mitzel. "Measuring Classroom Behavior by Systematic Observation." In Gage, N. L. (Ed.) Handbook of Research in Teaching. Chicago: Rand McNally, 1963.

Meux, Milton. A Model of Evaluative Operations in the Classroom. A paper presented at the National Council for the Social Studies, 1966.

_____. "Studies of Learning in the School Setting." Review of Educational Research. Vol. 37, No. 5, 539-561, December, 1967.

Meux, Milton, et al. Evaluation Teaching Strategies in the Social Studies. Salt Lake City: Bureau of Educational Research, University of Utah, 1967.

Mitchell, Frank W. "Some Notes on the Concept of Teaching." Journal of Teacher Education, 17, Summer, 1966, 162-71.

Oakeshott, Michael. "Teaching." In Hyman, Ronald T. Contemporary Thought on Teaching. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971.

Oliver, Donald W. and James P. Shaver. Teaching Public Issues in the High School. Boston: Houghton Mifflin Co., 1966.

Perkins, Hugh V. "A Procedure for Assessing the Classroom Behavior of Students and Teachers." In Hyman, Ronald T. Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Raths, James D. "An Application of Clarifying Techniques to Academic Underachievers in High School." Unpublished Doctoral Dissertation, New York University, 1960.

Raths, L. E., M. Harmin, and S. B. Simon. Values and Teaching. Columbus, Ohio: Charles E. Merrill, 1966.

Raup, Bruce R. "The Improvement of Practical Intelligence." In Massialas, Byron G. and Benjamin C. Cox. Inquiry in Social Studies. New York: McGraw-Hill Book Co., 1966.

Rokeach, Milton. The Open and Closed Mind. New York: Basic Books, Inc., 1960.

Rosenshine, Barak. "Evaluation of Classroom Instruction." Review of Educational Research. Vol. 40, No. 2: 279-296, June, 1970.

Sarason, Seymour B. "American Education: The More Things Change the More They Remain the Same." AAUW Journal, Vol. 65, No. 2: 23-27, November, 1971.

Scheffler, Israel. "Philosophical Models of Teaching." In Hyman, Ronald T. Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Simon, Anita and E. Gil Boyer. Mirrors for Behavior: An Anthology of Observation Instruments. Philadelphia: Research for Better Schools, Inc., 1970.

Simon, Sidney B. "Value Clarification: Methodology and Tests of an Hypothesis in an In-Service Program Relating to Behavioral Changes in Secondary School Students." Unpublished Doctoral Dissertation, New York University, 1958.

Smith, Louis M. Group Processes in Elementary and Secondary Schools. The National Education Association, 1973.

Smith, B. Othanel. "A Concept of Teaching." Teacher's College Record, Vol. 61: 229-241, February, 1960.

_____. A Study of the Strategies of Teaching. Urbana, Illinois: Bureau of Educational Research, University of Illinois, 1967.

_____. "Recent Research on Teaching: An Interpretation." The High School Journal, Vol. 51: 61-73, November, 1967.

_____. The Study of the Logic of Teaching. Urbana, Illinois: University of Illinois Press, 1970.

Taba, Hilda, S. Levine and F. Elzey. Thinking in Elementary School Children. Cooperative Research Project No. 1574, U.S. Office of Education, 1964.

Urbach, F. "The Study of Recurring Patterns of Teaching." Unpublished Doctoral Dissertation, University of Nebraska, 1966.

Wert, James E., Charles O. Neidt, and Stanley L. Ahmann. Statistical Methods in Educational and Psychological Research. New York: Appleton-Century-Crofts, Inc., 1965.

White, Jack. "The Relationship Between Values and Success in Student Teaching." Unpublished Doctoral Dissertation, George Peabody College for Teachers, 1966.

Withall, John. "The Development of a Technique for the Measurement of Social-Emotional Climate in Classrooms," In Hyman, Ronald T. (Ed.) Teaching: Vantage Points For Study. Toronto: J. B. Lippincott Co., 1968.

Zahorik, John A. "The Nature and Value of Teacher Verbal Feedback." Unpublished Doctoral Dissertation, The University of Wisconsin, 1966.

APPENDIX A

SUMMARY OF MOVES IN

EVALUATIVE VENTURES

MOVES IN EVALUATIVE VENTURES

1. Identification Moves

   1.1 Identification of Value Object and/or Value Term. Either the value object, or the value term, or both, are named or identified. In the case of the value object being a report or action, it may be given or performed.

2. Descriptive Moves

   2.1 Explication of Value Object.

      2.11 Description. A description of the attributes, properties, etc., of the value object. When the value object is an argument or proposition, this may include discussion of the premises, assumptions, or evidence on which the argument is based.

      2.12 Classification. The value object is identified as a member of some more general descriptive (not normative) class of things.

      2.13 Subsidiary Rating. The value object is given some rating which is different from (i.e., involves a different value term) from the rating which forms the main point of the discussion.

      2.14 Instance Comparison. Instances of the value object are compared in order to illustrate or demonstrate some characteristic of the value object.

   2.2 Identification of Relational Properties.

      2.21 Consequences. A description of the consequences, products, actions, outcomes, etc., of the value object.

      2.22 Origins. A description or discussion of the antecedents, origins, causes or reasons for the value object.

   2.3 Instance Description. An instance, or subclass of the value object is named or described. Characteristics, origins, consequences, etc., may be mentioned.

3. Rating Moves

3.1 Rating of the Value Object. The value object which forms the center of the discussion is rated as to its value.

3.2 Rating of Characteristics. Some characteristic of relational property (consequence or origin) of the value object is rated as to its value.

3.3 Instance Evaluation. Some instance, or subclass of the value object is rated as to its value. The instance may be either real or hypothetical.

4. Criteria Moves

4.1 Explication of Value Term. A description or discussion of the evaluative force, or meaning of the value term.

4.2 Citing Criteria. A standard or rule, or some set of alternative standards or rules, by which a rating of the value object can be made, are stated or discussed. There may, or may not be discussion of the relative importance of alternative standards or rules.

4.3 Substantiation of Criteria. Evidence or reasons for or against some rule or standard for rating the value object, are given or discussed.

4.4 Irrelevance of Value Term. The irrelevance of the value term, or some or all of the criteria for the value term, is asserted or discussed. Or it is asserted that the value term cannot be applied because of the lack of appropriate evidence.

5. Relational Moves

5.1 Explanation of Discordant Characteristics. Evidence or explanation is given to indicate why some characteristic of the value object which is apparently discordant with a previous rating, should be discounted or ignored.

5.2 Citing an Alternative Value Object. An object, practice, reason, etc., having a value rating different from the value object under consideration is cited or discussed. This alternative value object may be real or hypothetical.

5.3 Citing an Authority. The opinion or conclusions of some authority such as a public figure or textbook writer are cited as evidence for or against a rating of the value

object. Any discussion of the credibility, or expertness of such an authority, is also included in this move.

5.4 Implication. A rating is supported on the grounds that it does not have the same characteristics or effects as other objects which have an opposite rating.

5.5 Analogy. The value object is likened to another object customarily believed to be either good or bad, or widely practiced. Evidence may or may not be given to support the analogy.

6. Tangential Evidence

6.1 Facts, beliefs, etc., which are relevant to the value object, but not directly relevant to the rating of the object, are cited or discussed. (Also included in this category are moves in which a value object, other than the one which is central to the discussion, is rated, apparently because of misunderstanding, misinterpretation, etc.).

APPENDIX B

SUMMARY OF FLANDERS' INTERACTION ANALYSIS SYSTEM

FLANDERS' INTERACTION ANALYSIS SYSTEM

TEACHER TALK	INDIRECT INFLUENCE	1. *ACCEPTS FEELING: accepts and clarifies the tone of feeling of the students in an unthreatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included. 2. *PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension, but not at the expense of another individual, nodding head or saying "um hm?" or "go on" are included. 3. *ACCEPTS OR USES IDEAS OF STUDENT: clarifying, building, or developing ideas suggested by a student. As teacher brings more of his own ideas into play, shift to category 5. 4. *ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.
	DIRECT INFLUENCE	5. *LECTURING: giving facts or opinions about content or procedure; expressing his own ideas, asking rhetorical questions. 6. *GIVING DIRECTIONS: directions, commands, or orders which students are expected to comply with. 7. *CRITICIZING OR JUSTIFYING AUTHORITY: statements intended to change student behavior from unacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.
STUDENT TALK		8. *STUDENT TALK - RESPONSE: talk by student in response to teacher. Teacher initiates the contact or solicits student statement. 9. *STUDENT TALK - INITIATION: talk initiated by students. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk.

SILENCE	10. *SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

*There is NO scale implied by these numbers. Each number is classificatory, designating a particular kind of communication event. To write these numbers down during observation is merely to identify and enumerate communication events, not to judge them.

APPENDIX C

SUMMARY OF FLANDERS' MODIFIED INTERACTION ANALYSIS SYSTEM

FLANDERS' MODIFIED INTERACTION ANALYSIS SYSTEM

Teacher Talk	Response	1. ACCEPTS FEELING. Accepts and clarifies an attitude or the feeling tone of a pupil in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.
		2. PRAISES OR ENCOURAGES. Praises or encourages pupil action or behavior. Jokes that release tension, but not at the expense of another individual: nodding head, or saying "Um hm?" or "go on" are included.
		3. ACCEPTS OR USES IDEAS OF PUPILS. Clarifying building, or developing ideas suggested by a pupil. Teacher extensions of pupil ideas are included but as the teacher brings more of his own ideas into play, shift to category five.
		4. ASKS QUESTIONS. Asking a question about content or procedure, based on teacher ideas, with the intent that a pupil will answer.
	Initiation	5. LECTURING. Giving facts or opinions about content or procedures; expressing his own ideas, giving his own explanation, or citing an authority other than a pupil.
		6. GIVING DIRECTIONS. Directions, commands, or orders to which a pupil is expected to comply.
		7. CRITICIZING OR JUSTIFYING AUTHORITY. Statements intended to change pupil behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.

Pupil Talk	Response	8. PUPIL-TALK-RESPONSE. Talk by pupils in response to teacher. Teacher initiates the contact or solicits pupil statement or structures the situation. Freedom to express own ideas is limited.
	Initiation	9. PUPIL-TALK-INITIATION. Talk by pupils which they initiate. Expressing own ideas; initiating a new topic; freedom to develop opinions and a line of thought, like asking thoughtful questions; going beyond the existing structure.
Silence		10. SILENCE OR CONFUSION. Pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

APPENDIX D

SUMMARY OF ARTICLES

HE SAYS 'BAR THEM FOR GOOD'

I see in The Journal, 15 moose were slaughtered by "Americans," and the fine was in the sum of $3,100. This was not nearly enough to what it should have been. The fine should have been $1,000 for each person, and also their fingerprints taken. And they should have been barred from Canada for good.

I know of a case where a local homesteader shot a moose for meat for his family. The fine was $500. He had to sell two of his milk cows which was part of his living. Where does the slack come in between the big-moneyed guy and the man who makes a bare living.

I remember two similar cases of slaughter of game that happened back a few years ago, only this was elk.

Thirteen head were slaughtered north of Edson, and 17 head were slaughtered south of Carrot Creek. Now these Americans, or some of them, could be the same bunch of gangsters that got the moose. They take snowmobiles and run them where their pals are waiting with high-powered rifles, and it is no problem to make a wholesale killing.

James P. Peach.
Peers

AND LETTERS TO THE JOURNAL SAY . . .

'IT'S AS IF OUR COURTS ARE AFRAID'

When I read the article concerning the illegal slaughter of 15 moose by American hunters I could not help but become incensed.

Not satisfied with destroying the flora and fauna of their own land, it seems these Americans want to spread their blight to Canada. These neighbors of ours to the south do not seem content unless they are butchering something, whether it be human beings in Vietnam, in their own city streets and on university campuses, or their own (and now our) wildlife. This lust for carnage seems to be part of the great American way we hear so much about.

But what sickened me even more was the treatment our courts gave them. These men (and I use the term loosely) came here armed not only with high-powered weapons, but with trucks and tracked vehicles. This was no small hunting party. This equipment is expensive; these men had plenty of money.

Yet our laws seem to think a $300 fine is going to deter them. It appears as if our courts, like our governments, are afraid to hurt the feelings of our wealthy friends.

R. Berube,
Stony Plain

Editor's note: The maximum fine for illegal possession of the moose is $300.

'SLAUGHTER SHOWS U. S. ATTITUDE TO RESOURCES'

I feel that this wholesale slaughter of Canada's wildlife typifies American crass attitude to the natural resources of Canada and other countries.

As one who is opposed to the killing of wildlife to satisfy the killer instincts of so-called sportsmen, I strongly urge a re-evaluation of Canada's game laws and fines for such offences as the one committed by these Americans.

Why must we yield our natural resources to satisfy the sadistic pleasures of foreigners? What really hurts is the fact that the fines issued were an insult to all Canadians. A mere $100 means nothing to Americans, who will pay thousands of dollars for a hunting trip. They probably left with a smile on their faces.

Douglas R. Flaig,
University of Alberta

'NO WONDER CANADIANS FEEL THEY'RE BELITTLED'

It is little wonder that we Canadians feel belittled by the Americans when we come up with such acts of utter nonsense as evidenced by the fines handed out to these lawbreakers from across the border.

Each individual fine should have been of a size the equal of all the fines. This is what they would expect in their own country. The pittance that they left behind wasn't worth the court action and will soon be forgotten as some sort of joke.

In Alaska it is considered less dangerous to shoot a game warden than to kill game illegally. In the Fairbanks area a local couple, who were caught with a freshly-killed cow moose, were fined $500 each and

had their rifles confiscated. So you can imagine what their authorities would do to Canadians caught under circumstances similar to those in the Valleyview area.

Predators of this ilk should be given fines ranging in the thousands rather than the hundreds of dollars, then be escorted to the border and warned never to cross it again.

Let's opt for a little national respect.

A. M. Bradkoski,
University Avenue

'NOT ENOUGH WARDENS TO DO THE JOB'

The game wardens who caught the American hunters with their illegal bag of moose are to be commended.

I feel that the fines were too small, however, to act as a deterrent to other sportsmen, whether Canadian or American. Any hunters who slaughter our wildlife in that manner should be fined, have their guns permanently impounded, and be banned from ever having a hunting license in Alberta again.

Our game wardens are too few to properly police our wilderness and enforce our game laws, so those few offenders who are caught must be dealt with severely.

I have heard only too often of hunters who have been downwind from a herd of moose and have killed four and wounded two and bragged afterwards that "it was like shooting fish in a barrel."

The American hunters who were caught are, I fear, only slightly less sporting than their Canadian counterparts.

Roy Sheppard,
89A Avenue

A JOURNAL COLUMNIST CHARGES . . .

15-MOOSE SLAUGHTER SHOWS ALBERTA GAME POLICIES INADEQUATE

By Gordon Aalborg
Journal Peace Area Bureau

VALLEYVIEW - Several inadequacies in Alberta's game management policies are exemplified by last week's apprehension of 11 American hunters, near Valleyview with 15 illegal moose.

These Americans were fully aware of what our government apparently fails to recognize--no fish and wildlife officer, alone, can adequately patrol a 6,000-square-mile district.

The work done by officers Gordon Lee of Valleyview and Jan Allen of Whitecourt deserves considerable credit, but this doesn't alter the fact that this province is severely short-staffed in the game management department.

Both parties of Americans came to Alberta--deliberately--planning to hunt without a guide as required by law, and knowing they stood an excellent chance of getting away with it. Several of these men had been here before. It's obvious in the fact that they were properly licenced that some arrangement had been made for an unscrupulous guide to sign the required permits for exporting the meat.

Many game officers will admit--and rightly so--that this province's testing standard for big-game guides is little more than a farce. Almost any competent hunter could pass the test, and there's evidence that plenty of incompetent ones have, as well.

This, in fact, was one excuse given by a member of one American party for their flagrant abuse of the law. They were unable, he said, to determine where or how to find a competent and reliable guide and chose to hunt without one rather than use one of the many fly-by-night outfitters operating in the province.

Here, again, policy is at fault. The province refuses to take a stand in recommending those guides known to officers as reliable and upstanding members of the profession. There are dozens of so-called guides operating in Alberta who couldn't track a moose in fresh snow.

Surely some upgrading of licensing standards is called for. If the government isn't prepared to recommend an outfitter, then he shouldn't have a licence.

Existing legislation pertaining to guides has no teeth at all: there's no longer anything making guides responsible for their clients or their actions, and even the laws regulating activities of the guides, themselves, are ambiguous and of little use to enforcement officers.

Enforcement officers and guides, alike, are divided on the question of regulated guiding areas, mostly because of the problems involved in distribution of these zones. But the idea has merit and deserves fuller investigation.

Certainly the most crucial issue, however, is the simple matter of inadequate numbers of enforcement officers. The majority of Alberta's fish and wildlife officers work long hours: 14-hour days almost constantly throughout the hunting season. And the pay is nothing to write home about.

At least six good officers have left the department within the past 18 months, mostly because of difficulties with administration. The job is not without risk. Apart from having to travel alone over difficult and sometimes impossible roads, the officers have the certain knowledge that almost everyone they're dealing with carries a weapon.

There have been instances of wildlife officers being beaten: others have suffered vehicle breakdowns in remote areas or spent long hours fighting their way through mud and washouts.

To the public, they're policemen, and they suffer the same frustrations . . . enforcing laws they often don't agree with and didn't help to make, but never having an opportunity to help create reasonable game laws.

Adequate legislation is virtually the only tool a game officer has to work with, and it's obvious some changes are needed, particularly with regard to non-resident hunters.

Some system must be possible whereby non-resident hunters can't be issued licences without proven provision for the required guides. Changes in legislation could then be implemented so that a guide is totally responsible for the actions of the hunters under his jurisdiction.

It might be a good idea to have a committee of working enforcement officers appointed to hash over the Wildlife Act.

APPENDIX E

SUMMARY OF TEACHER'S GUIDE

SUMMARY OF TEACHER'S GUIDE

Two weeks before actual classroom observations were to be made, the investigator will meet with the cooperating teachers in each school. The purpose and the procedures to be used during the study will be explained. Each teacher will be given a teacher's guide containing the procedures to be followed, and the content to be discussed during recording sessions.

TEACHER'S GUIDE

Purpose. The major purpose of this study is to undertake a tri-dimensional descriptive analysis of teacher-student verbal interaction in Grade ten social studies classrooms under normal conditions. By permitting the investigator to make observations in your classroom under these conditions, further insight into the area of teacher-student interaction may be gained. You are assured that this study is in no way an evaluation of your performance, and that total anonymity will be maintained.

Classroom Recording Procedures. Data collection procedures for this study involve verbatim audio tape recordings of live classroom verbal inter-action. To insure quality audio tape recordings, two microphones will be used--one will be used to record teacher talk, the other will be used to record student talk. The two microphones will be connected to a Sound Mixer (Model 68). The Sound Mixer will be attached to a Sony TC-105. The investigator will be present only to operate the recording equipment. Anecdotal records will be made of any irregularities that occur in the recordings. You may be asked to clarify certain situations, where irregularities occur, after recording sessions.

Instructional Procedures. It is recognized that the presence of a tape recorder and an outside observer will probably influence student behavior. Therefore, to minimize this interference, you are asked to use whatever methods you normally follow during class discussions. This procedure is emphasized in that the verbal interaction recorded should represent normal classroom discourse.

Content to be discussed. The content to be discussed during observation sessions consists of a four page mimeograph containing a preselected discussion topic. The discussion topic is concerned with the illegal killing of 15 moose, in Alberta, by American hunters. All material contained in the mimeograph pages is taken from the editorial section of the Edmonton Journal, December 5, 1971. Of the six articles, one was written by a member of the Edmonton Journal. Five articles are letters to the Editor. You are asked to base your discussions on the content in the mimeograph sheets, and to follow the procedures listed below:

Procedures	Notes
1. Pre-recording procedures. During the last 10 to 15 minutes of the class period before recording sessions, inform your students that they will participate in a recording session the following day. Answer any questions they may have concerning the nature of the procedures that will be followed. You might want to explain that there will be recording equipment and an outside observer present during recording sessions, and that they will be asked to read and discuss information taken from the Edmonton Journal.	
2. Procedures to be followed on those days when observations are to be made.	
2.1 Class discussions should last, on the average, about 45 minutes.	
2.2. Perform any normal classroom clerical tasks.	
2.3 Distribute mimeograph sheets to students. Explain that the discussion for today will center on the material in the mimeograph sheets. Allow the students sufficient time to read all the articles. This should take from 15 to 20 minutes.	
3. After students have read the material in the handouts, begin class discussion. Base the discussion on the content in the mimeograph handout.	

APPENDIX F

SAMPLE VERBATIM TYPESCRIPT

SAMPLE VERBATIM TYPESCRIPT

T: Ok, you can say anything you have to say on the articles, and stick pretty well to the facts at hand. Ah, George, what did you think of this?

S: What did I think of it! (pause) I don't know. I thought it was stupid.

T: Why?

S: How these Yankies got away with all that, to come here in Alberta and shoot moose like that. Didn't even say how much they got fined.

S: Yes it did.

S: It said 300 dollars.

T: How much did they get fined, Pat?

S: 300 dollars. How much does a moose cost? (Confusion)

T: How much is one worth? Does anyone here hunt? Do you know how much a moose license cost?

S: Over a 100 dollars.

T: Over a 100 dollars for a moose license. And, they got fined, from these articles how much did they get fined for 11 moose? Or 15 moose, sorry.

S: 300 dollars.

S: That is not enough; they should have been fined more.

(Confusion)

T: Oh, is that enough?

S: No.

T: Why not, (name of student)?

S: Well, I think it should have been more; I think that, ah, their license should have been banned, and never let them in Canada forever.

T: Yes.

S: Why didn't they do the same thing they did with those people up in Fairbanks?

T: You know the answer to that. What is it?

S: I don't know.

T: Where is Fairbanks?

S: In Alaska.

T: In Alaska.

S: Alaska is in the States.

T: You know the answer to that, why can't they?

S: (Confusion)

T: What does the fact that Fairbanks is in Alaska have to do with it?

S: It is in the United States.

T: Yeah, it is in a different country. Stewart?

S: I don't think it was totally the hunter's fault.

T: Why?

S: Well, they, for one thing they are supposed to have a guide, and if the warden is half awake he would have saw that, and there was enough people there, they wouldn't be out there, how many men, 11?

S: Just shooting up moose left and right.

S: Yeah, but the fine could have been much stiffer.

S: They are only allowed one moose each.

S: (Confusion)

T: Yes.

S: Well, they did it deliberately. And, because Alberta was so, like in The Journal it says that they were so inadequately, inadequately staffed and that is why the hunters got away with it.

S: (Confusion)

T: Now just a minute, you are saying they got away with it, did they get away with it?

S: No, they got caught.

(Confusion)

S: Well, look how many has got away with it, if they shot 15 moose and almost got away with it. I wonder how many have got away with it?

T: Yes.

S: Well, you know, like Tim said they came up and shot them deliberately, well anybody that gets a moose license and goes out and shoots moose does it deliberately.

S: But not slaughter.

S: Yeah, well I mean, yeah I see that, but they are only allowed one moose a piece, so they did kill them, but if guys get 15 moose, they should have fined them really stiffly and kicked them out of province.

T: Ok, Ken.

S: What puzzles me is that they came across the border with all this expensive equipment, trucks, Land Rovers and all that, ah, why didn't, ah, Customs, yeah, catch them then? Because we are not allowed to go down there with any kind of firearms. And, they are allowed to come up here.

T: Ok.

S: They probably bought all their equipment in Canada.

T: Yes.

S: (Inaudible)

T: I have a question to ask. Would it have made any difference, would there have been as much furor over it, would you guys have been as incensed if it had been Canadian hunters?

S: No.

T: Instead of Americans.

S: No.

S: They could have probably been fined more.

T: Yes, would you have been more incensed?

S: If they were Canadian, no.

T: You'd be as mad as you are toward the Americans. Why?

S: I don't know. I don't care if they are Americans or Canadians.

T: Yes.

S: I wouldn't, I wouldn't feel, you know, as bad, you know, just if Americans, if Canadians went out and killed 15 of our moose, ah, I wouldn't like it, I can see one or two because a moose is rather big, but 15 moose. But, I think I would feel the same way toward Canadians.

T: Yes.

S: I think I would even be more mad if they were Canadians, Canadians are supposed to be more aware than, they are supposed to be trying to keep our game going instead of slaughtering them all the time, and so if it was Canadians I would really be pissed off at them.

T: Yes (student's name) would you?

S: Oh, (inaudible).

T: Anybody else? Yes.

S: Canadians are supposed to know what is happening, they are supposed to know that there aren't many moose left in Alberta, there is quite a few, but not enough so every guy can go out and shoot as many as he wants. So, I think Canadians should be more aware of what they are doing.

T: What about the game laws. Some of you mentioned this a bit earlier, but are they sufficient?

S: No.

S: No. No way, they have one guy to cover six thousand miles, square miles, that is how they got away with it. How can a guy supervise 6000 square miles? One Person.

T: (Student's name)

S: Also, another problem is, ah, the guides I think they should have more adequately educated guides, trained guides because it said in here that some of them couldn't track a moose in fresh snow.

T: Ok, any other comments? In back, Ken.

S: Oh, I don't think Americans should be allowed to come up here and kill anything at all. Because they have got a country of their own, twice as big as Canada. . . .

S: (Confusion)

T: Yes.

S: I think it said in here (inaudible) they are coming up to Canada to kill off all our moose, I agree 100 percent with that, that they blew their chances in trying to control their wildlife as much as we do, so, you know, it is their own fault, and they shouldn't be allowed up here to try and kill off all our animals.

T: (Student's name)

S: Well, I think we are talking about the articles, we are not talking about Americans, but about Alberta policies cause that is what points to through the whole thing. It just uses the Americans as an example. Really it is talking about how inadequate Alberta's wildlife or conservation, whatever you want to call it.

T: Game acts.

S: Game acts.

T: Keith.

S: I think about what it says here there is not enough wardens to do the job, I think if they made the jobs a little bit better, like say better pay, you know, not as much hassle with the administration and all that stuff that there would be a heck-of-a-lot more guys in there, you know quite a few people are interested in wildlife, but once they get into the kind of hassle they go through to be a game warden and stuff like that, they turn around and leave the job. If they made the job, ah, easier, you know, better so that it would suit people better, then I think there could be a lot of people wanting to join.

T: Ok, is more men the only solution?

S: No, I think more men and stricter game laws.

T: Well, how do you make the game laws stricter? Yes.

S: Well, if they do what I am thinking of, instead of shooting our moose, I would take their license away and make it so they couldn't come up here and hunt for 5 years after.

S: Take their license, show them to the border and say don't come back.

T: What are you going to do with the Canadians that break the law?

S: Fine them a lot of money.

T: Karen.

S: You can say that, I think that no person other than a Canadian should be able to hunt our wildlife in our, in our, you know, in, cause there is not enough to go around anyway, I guess I am just prejudiced against hunting anyway, but it just bothers me that, ah, they, anyone can come up, that isn't Canadian, so we should put that in the laws, that is just for Canadians.

T: You had your hand up.

S: Well, I don't mind Americans coming up here, I mean I don't have anything against Americans, they can shoot moose, too, along with Canadians, but when they start slaughtering moose and stuff like this, ah, the penalty should be a lot stricter, their licenses should be taken away for quite a long period of time, in fact forever. But, I don't mind as long as they obey the laws of Canada and stuff, I think they should be able to come up and shoot just like Canadians.

T: (Student's name)

S: Is this license, this Canadian license, ah, when they come out to Alberta they buy a Canadian license.

T: They buy . . .

S: I mean if you buy one in Alberta, and paid here for your license you couldn't hunt, say, in Quebec?

T: I am not sure about that, data from the article, that the Alberta Game Act, which means it would be under Alberta control, but I am not sure whether, you know, if there is a Canadian license or whether there is an American, oh, whether it is a Canadian license or not. This is found in the BNA Act. Ah, hunting license, I think it is a provincial right, not a Federal right which would mean that every province has the right to license, when you get fishing license I know it is an Alberta fishing license. So he would have to go back to the States and then reapply for a Quebec one, you know.

S: Do they keep a record like, do they send it to the people in the other provinces that control wildlife resources and tell them what happened in Alberta, cause it can happen again and again in different places in Canada. You know, like a convention, would their names be sent down to all provinces? Because if they are not, that is so ridiculous.

T: I don't know if the article does tell you, does it? Ken.

S: So, if this is the case then it is not really the provinces fault. It is all Canada, a hunter gets his license taken in Alberta, he goes to Saskatchewan and if the same thing happens there he can go

to B.C. and all across Canada. You can get away with a lot, ah, you could get away with it 3 or 4 times you get caught, so really it is not the provinces.

T: Yes.

S: What he is saying, like, like we are not sure but they can go to each province why don't they take their license away and throw them in jail for a while, that way they can't go to any other provinces. You know if they can sweep across provinces you might as well put them in jail, that would stop them for a while.

T: Yes.

S: Well, that would never work because then Canadian and American relations would sorta be, ah, worse.

S: (Confusion)

T: Yes.

S: Well, if you did try to put Americans in jail Nixon would be breathing down our necks, so it, ah, would start a political hassle. The States would charge that we were treating them unfair and all that kinda junk.

T: Yes.

S: I don't think so, I think that any, you know, average American who read about what happened here I think they would just be, ah, you know, sick, sicker about the whole situation, because it was their, you know, these people are their nationality. Oh, we have the idea that Americans . . .

S: (Confusion)

S: The average American does care.

T: Yes.

S: Well, like, ok couldn't you though if they allowed you to keep moving to these couldn't you throw them out of the country and not allow them to come back into Canada for a couple of years?

S: Well, you would have to have Canadians, too, who slaughter moose.

S: I would allow them back into Canada, but they can't get a permit to hunt.

T: Yeah, that would be prob--I don't think you can completely throw them out, just for illegally hunting moose. Yes.

S: I disagree with Keith when he talks about, ah, those hunters, like we should put them in jail. I think that it only goes to show how afraid we are of them if we do put them in jail. If they started reading articles down there about how unfair we were to Americans, I'm sure the Americans would not like a severe penalty.

S: I don't think 15 moose is going to start a war.

S: Well, I don't think we can, we need the U.S. We need them because we export a lot of stuff down there, like most of our raw materials we send down there. Like they can pretty well do what they want, they can put, ah, a 10 percent surcharge tax on any other country, they can do that pretty well all over the world.

S: (Confusion)

T: Well, does, are 15 moose going to start a war?

S: Well.

T: If you broke the law down in the States, Pete, would you expect to be put in jail?

S: Yes.

T: If that were the penalty.

S: Yes.

T: Do you think an American who came up here and broke the law would expect to be put in jail if that were the penalty?

S: Well, he has broken one of our laws, and I don't care if he is American, German, or Bulgarian. I that, he has broken one of our laws so he has got to pay the penalty. If Canadians break the law . . .

T: Well, did they get the penalty?

S: They paid the penalty, 300 dollars.

T: Ok, but is that the judge's fault or the Act's fault?

S: The Act's fault.

T: Well, then what are you . . .

S: I would say the Act is (inaudible).

T: Ok, Stewart.

S: I think, I think it told them, I think it is mostly their fault, their only excuse for shooting all those moose was that they were unable to find a competent guide. That is no excuse. If they can't find a guide in all of Alberta, they must have been not trying so hard.

S: I think that there should be at least, you know, a degree of, ah, you know, laws dealing with this, it can't be just cut a dried, like if they had no reason if it was just sport or something and 15 moose were killed, whereas if it wasn't, you know, if there was some reason for it, they had something, well this is just, you know, this is just what they did. It was a slaughter and there was no real reason they didn't say anything about it.

S: I would have to disagree with some of that because, ah, I think like I said before a moose is pretty big and you can get a lot of meat off of it. And, like 11 men and 15 moose, you know, I mean if they are going to feed their families with it they could store well maybe what, half of it (inaudible) they shot five and one-half moose, something like that or six moose, you know, they could share it among their families and it would still be enough to feed them.

S: Ah, what, the fines weren't nearly enough, ah, 300 dollars to some millionaire, he can just use that as a tax write-off. Some of these filthily rich capitalists down there, you know, 300 bucks is nothing to them.

(Confusion)

S: Like Ken said a lot of Canadians, you know like people now, the only good thing that came out of the slaughter was that a bunch of Indian people like that, they got all the moose meat. That is the only thing that come out good about it.

T: Well, I have one further question to ask you. Oh, they, Stewart . . .

S: Well, I think this article shows how scared we are of Americans. They had no good reason to shoot the moose yet this article backs up the Alberta Wildlife, ah, enforcement. It doesn't really say much about how the Americans were wrong.

S: An American probably wrote the paper. Mostly just talks about how it wasn't really their fault they, every paragraph it says here again policy is at fault. Practically every time it is the policy, it is not their fault. That is what the articles say.

T: Do you think the article is wrong?

S: Yes, I think they are crazy. The article is one-sided.

T: Why?

S: The articles are one-sided for the Americans.

T: One sided which way?

S: Well, they are hacking at, like they, ah, against Alberta game laws than they are against the Americans. All they say, you know, they say well, the articles, "I am mad because these Americans came and slaughter our moose, and I don't know why the Alberta game laws . . . on and on about the Alberta game laws, about the wardens and guides and all that stuff, they don't even mention the Americans only in a couple of sentences all the rest is about game wardens and stuff like that.

T: Ok, but now have you, you people as a whole have been talking about the game laws or have you been talking about Americans? And, do the letters to the editor talk about game laws or do they talk about the Americans?

S: Yeah, but still the article, we are talking about the article.

S: The article talks about the policies, and the letters talk about the Americans.

(Confusion)

T: Name of student--you haven't said anything, has the class been talking about Americans or have they been talking about the game laws?

S: Ah, I would say they have been talking about Americans.

S: That is, that is because the article doesn't talk enough about the Americans, so we decided to talk about them.

T: Oh, I see.

(Pause)

T: What about the game laws? How many of you people hunt? or have hunted any type of game?

(Confusion)

T: Honestly now how many of you have gotten over your bag limit?

S: Fishing.

T: I don't care whether it was fishing or ducks or geese or moose or deer or whatever. How many have gone over your bag limit for the day?

S: (Confusion)

T: Have you ever been caught, Doug?

S: No there were about three of us though . . .

T: Yeah, but between the three of you, between the three of you, did you have more than you should have?

S: One or two, but not much.

T: But, that was still against, that was over the limit, right?

S: (Confusion)

T: Keith.

S: Do you mean here, or other places?

T: I mean here in Canada.

S: I went over the limit a couple of times, yeah here.

T: Who else had his hand up? Jeff.

S: Just one example of the Greyling, but they are so easy to catch you can't help it.

S: (Confusion)

T: All right, but you all in essence you have broken the law, right? I mean I have done it with trout, too.

S: (Confusion)

T: And, I knew.

S: Ah.

T: Ken.

S: Ah, I can fish, if you break a law with fish, I mean more or less fish can, you know, can come back, well ok, we got these fisheries, or hatcheries, or whatever they call them, they supply the lakes with fish, but when you get something like moose, when they get down to one or two, you know, and it happens to be two males, there is no way you can save them.

S: (Confusion)

T: Yeah, but well, is there a difference though?

S: Yes, there is.

T: Ok, what about people, you have all heard I am sure, of some person who has gone out and shot seven ducks when he was only supposed to shoot five ducks per day. Or there are five guys out shooting; they are only supposed to have 25 birds and they have got 35.

S: Well, fish, you said fish here, they are plentiful you could say more or less.

T: I was saying, ah, . . .

S: A moose is bigger than a duck.

T: What difference is there?

S: (Confusion)

T: Hey, hey, hey, hey.

S: They don't have hatcheries for ducks, they just reproduce on their own, but fish you know you can, ah, make more hatcheries and replant lakes and there are a lot of lakes in Alberta that never had fish originally, but now they have been put in by the Alberta Government.

T: Doug.

S: The amount of meat you get from a duck and a moose there is an awful lot of difference.

T: Keith.

S: Well, like, like (name of student) says they have like fisheries and they replant, ah, like lakes, how long are they going to be there?

S: What, fish!

S: At a maximum in two years they kill off all the big fish and put in little ones because big ones get too hard to catch because there is too much . . .

S: Yeah, but how long are we going to be able to have fish, we won't have fish more than a couple of hundred years.

S: (Confusion)

T: Dorothy.

S: What difference does it make if you shoot more moose than you are supposed to, if you shoot more ducks than you are supposed to, you are still breaking the law no matter what.

S: (Confusion)

T: All right, what you people are saying, what you people are telling me is that it is all right to do small, petty breakings of the law, that doesn't matter.

S: (Confusion)

S: But if you know you are deliberately taking more than you are supposed to, I think you should be fined the same penalty, and a person who didn't know he was taking more, he should not be as severely punished.

S: Oh, that is just making a big story, a fellow takes too many fish, "Oh, I didn't know, I didn't know, then I am not supposed to get fined as much even though I did know I could make up a story, I wasn't sure, I didn't know."

T: No, but it is written, I think it is written right on your license, bag limit per day.

S: (Confusion)

S: Oh, I think you misunderstood me on a point there, you know. I said, ah, it is ok to take more fish, I didn't mean take more, a lot more, say 10 or 20 more than you are supposed to. I mean maybe 3 or 4 is ok, but I mean, ok, so every person takes 3 or 4 of these fish over the limit, it is still not going to kill Alberta, or Canada because you got, like Jeff said you got these hatcheries, but if every hunter took 3 or 4 moose more than he is supposed to, you know . . .

S: It is the same thing, if you take every fisherman who has gone out and taken 3 or 4 more fish than he is supposed to, it adds up.

S: No, it would, I know, but it is still . . .

S: (Confusion)

T: Jeff.

S: It is a lot different . . .

T: Quit.

S: You have got so many supplies, there is such a great supply of them, lots of lakes and they are growing because there are not enough fishermen fishing the lakes.

S: Yeah, fishing is different than hunting, hunting you can get you moose . . .

S: That is what I am saying, fishing is different.

S: (Confusion)

T: All right, you guys, Tom.

S: (Inaudible) Ah, hunting, but now you can get sonar equipment for fishing and you can, ah, get spot lights for, ah, night fishing, you can, ah, pole fish, you can get telescopic sights for a pole, if you can believe it. And, you can get so that you can shoot right at the fish and there is no refraction.

S: (Confusion)

T: Ok, if, what happens if you, well, I won't use fishing because Jeff will shoot me down, but if you use ducks or geese as an example, if I remember correctly a couple of years ago they severely limited both the bag limit and the, ah, number of licenses. And, that was because the populations was getting down. They had to limit it because of the, partially there weren't enough ducklings born that year, and there were, the conditions were bad, they shortened the season, they increased the license, they limited, they gave out fewer licenses, and they lowered the bag limit instead of being able to kill five, they could only kill 3 that year per day. Ah, is there a difference between killing in that particular year, killing five, which would have been the normal bag limit, when the bag limit was lowered to three, and, the . . . yes.

S: Ah, I am going to get just a little bit off the topic, you said killing 3 a day, hunters could kill 3 ducks a day for maybe two weeks. I think there should be a limit on that, too.

T: You would have to have some, I am not sure, but I think there is a limit on the total number you can get.

S: (Confusion)

S: If you have a hundred hunters out in one day, shooting 3 ducks each day, that is 300 ducks a day for two weeks, that is about 14 times 3, that is . . .

S: 4,200 ducks.

S: Right, that cuts them down pretty fast.

(Confusion)

T: Ok, back to the moose. Is it the game laws that are inadequate, or is it the policing or is it both?

S: Both.

S: (Confusion)

T: Doug.

S: The wildlife laws, stricter enforcement, the (inaudible) . . .

T: Ken.

S: I think everything but the policing itself is at fault, cause I mean you can only police certain amount of square miles. So, you know, what you, what you do police you do a good job of it. So, it is really not their fault, it is the fault of the laws and the government.

S: Well, it would be better if they had more guides.

S: Yeah.

T: Jeff.

S: Well, the law is more at fault than the police are, it is hard to patrol such a big area, and it is just like the police force you can't stop all the crimes, but you limit it down by restricting laws, and making the penalties bigger.

(Pause)

T: What would you people do, you would change the laws, how would you change the laws?

S: I would shoot the Americans.

(Confusion)

T: If I catch you with two moose and you are only supposed to have one that gives me the right to shoot you too, doesn't it?

S: (Confusion)

T: How would you change the laws.

S: Well, you would have to make the fines a lot stiffer, and a lot more law enforcement.

S: They could make the warden's job a lot nicer, like pay them enough.

(Confusion)

T: Ok, you have suggested that law should be changed to have stiffer fines, we should decrease the areas the warden has to control, that there was one other one, Ken, you, what did you suggest?

S: (Inaudible)

T: Ken?

S: Either have the fines increased or else have the Americans not allowed to hunt in Alberta.

T: Ok, but when you get to that point, Ken, to a certain extent you might agree and I might agree, but another extent I personally say those people do bring a lot of money and they do provide jobs for some people, if your life, if you are a good guide, Ken, and that happens to be your job . . .

S: Ok, but I mean there is a lot of Albertans that hunt, and, so therefore the guides would be hired, right? So, I mean one party of 11 Americans is only going to bring one guide. If there were maybe 50 parties of 11 Americans that would be a different story, ok, so they are bringing up money, but then again what is more, what means more, killing off our wildlife or bringing money to Alberta?

T: Ok, (inaudible).

T: Be quiet.

S: If you want both to exist there is going to be exaggerations on both sides, and the Americans are going to say ok, we'll try something, if we get away with it, we will try something more, if we get away with that, we'll try something more, that is exactly what happened here, they keep on trying something and they got away with 15 moose, and they only got fined 300 dollars each.

S: What difference is there the Canadians, what difference is there between a Canadian and an American are both men, and they are both going out to shoot.

(Confusion)

S: It is the same thing, a lot of Canadians have gone out and shot 15 moose the fine is going to be the same.

S: Well, I think it should be more for Americans.

(Confusion)

T: Settle down.

S: I think there should be restrictions on the type of equipment they can use, like you can shoot from a helicopter, you can't use snowmobiles they have cut that out, say you can use a Land Rover you have to stalk your prey.

T: Stalking your prey.

S: (Confusion)

S: You know, certain people would be frustrated, they wouldn't, they couldn't get anything, and they know they couldn't get anything they wouldn't go.

T: In other words you want to make it like a real sport again.

S: Yeah.

(Confusion)

T: Yes.

S: (Confusion)

S: She said what is the difference between Canadians and Americans, but at least Canadians go along with our laws, they respect our laws.

T: Be quiet, go on.

S: I think the fine should be stiffer for Canadians because they know the law a little.

(Confusion)

T: Steve and then Gary and the peanut gallery at the back keep their shells shut. Ok, go ahead.

S: Well, if Americans are different than Canadians how come it costs them more to get a license here than non-residents, non-Canadians, etc., if they were all the same, they are going to abide by the laws, then why isn't the license the same? Why are we treating them differently?

S: It is costing because they are Americans.

T: If they are non-residents, and, I am not sure but I would guess Jeff that perhaps if they came from Ontario to Alberta to hunt, you would be charged a non-resident fee. Because you are a non-resident of Alberta, not because you are a non-resident of Canada.

S: (Confusion)

T: (Student's name) has the floor next.

S: They say Canadians should be charged more. I don't think so because, ah, it is the people living here in Alberta that are paying the

taxes to keep these animals, we keep the wildlife parks, these Americans don't give us anything to help make wildlife park, but they shoot our animals.

S: (Confusion)

T: Ken.

S: If the Americans have so many millions of square miles, I don't know exactly, but I would take a guess, ah, what gives them the right to come up to Canada to wreck our land.

S: (Confusion)

T: Hey, quiet.

From here on the discussion became confused.

VITA

NAME: Raymond Lee Hanson

PLACE OF BIRTH: Portland, Oregon

YEAR OF BIRTH: 1935

POST-SECONDARY EDUCATION AND DEGREES:

Oregon College of Education
Monmouth, Oregon
1960-1963 B.S.

Oregon College of Education
Monmouth, Oregon
1966-1967 M.A.

University of Oregon
Eugene, Oregon
1972-1973 Administrative Certificate

HONOURS AND AWARDS:

Scholarship--Asian Studies
University of Hawaii
1964

Fulbright Award to Attend East African Seminar
Addis Ababa, Ethiopia
1965

Sessional Lecturer
University of Alberta
1967

Teaching Assistantship
University of Alberta
1970-1972

PUBLICATIONS:

None

EMPLOYMENT:

Classroom social studies teacher for 6 years
Instructional Program Coordinator
South Lane School District
Cottage Grove, Oregon
1973-present